

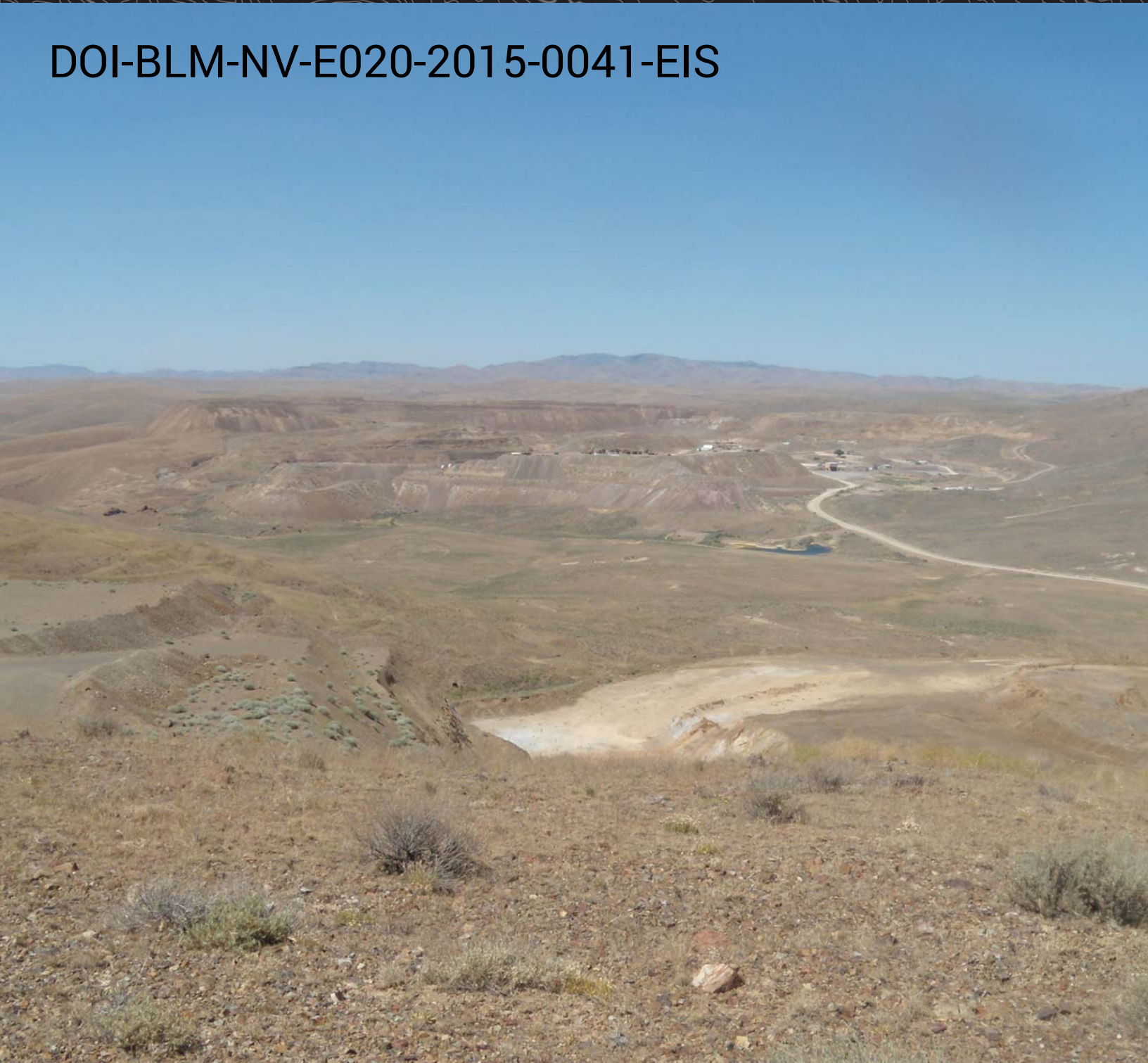


U.S. Department of the Interior
Bureau of Land Management

Rossi Mine Expansion Project

Final Environmental Impact Statement
2019

DOI-BLM-NV-E020-2015-0041-EIS





United States Department of the Interior



BUREAU OF LAND MANAGEMENT

Tuscarora Field Office
3900 East Idaho Street
Elko, Nevada 89801
<http://www.blm.gov/nv>

In Reply Refer To:
1793/3809 (NV-0200)
NVN-070547

MAY 24 2019

Dear Interested Party:

The BLM has completed the abbreviated Final Environmental Impact Statement (EIS) for Halliburton Energy Services Rossi Mine Expansion Project. The proposed project would be located in the Bootstrap Mining District, in Elko County, Nevada, approximately 45 air miles northwest of Elko and 25 air miles north of Dunphy. The proposed project would include an expansion of existing mine Plan of Operations boundary, expansion of existing open pits and waste rock disposal facilities (WRDF), development of new open pits and WRDF facilities, expansion and development of new roads, construction of electric power distribution lines, additional surface exploration within the project area, and expansion or modification of ancillary and support facilities within the proposed expansion area.

Under the Proposed Action, the Plan of Operations would increase to encompass 3,520 acres of BLM-administered land and 211 acres of private land. Construction and operation of the proposed project would result in approximately 1,167 acres of surface disturbance. The total surface disturbance for the project including existing, previously authorized, and proposed disturbance would be 2,063 acres on public and private lands. Upon completion of mining, the operation would be reclaimed.

The EIS analyzes the direct, indirect, and cumulative impacts associated with the proposed mining development activities. The Final EIS has been prepared in an abbreviated format and must be used in conjunction with the Draft EIS issued in September 2018. Together, the Draft and Final EIS constitute the complete EIS. The Final EIS includes responses to comments received during the public review period on the Draft EIS and updates to the Draft EIS.

Copies of the EIS are available in the BLM Tuscarora Field Office, 3900 East Idaho Street, Elko, Nevada. The EIS is also available on the BLM's e-planning NEPA website at <https://go.usa.gov/xnRCr>. Additional information is available online at <http://www.blm.gov/nv>, which also provides access to the BLM's e-planning website by clicking on Programs, then Planning and NEPA, and then the E-Planning Portal and follow the steps to access the EIS. Project materials may also be viewed at the BLM Tuscarora Field Office at the address indicated above, from 7:45 a.m. to 4:30 p.m., Pacific Time, Monday through Friday, except holidays.

Following a 30-day Final EIS availability and review period, a Record of Decision (ROD) will be issued. The decision reached in the ROD is subject to appeal to the Interior Board of Land Appeals. The 30-day appeal period begins with the issuance of the ROD.

If you would like any additional information, please contact Janice Stadelman, Project Lead, at (775) 753-0346 or jstadelm@blm.gov.

Sincerely,



Melanie A. Peterson
Field Manager
Tuscarora Field Office

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

BLM/NV/EK/ES/19-02+1793 DOI-

BLM-NV-E020-2015-0041-EIS

Bureau of Land Management

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Contents

1.0	INTRODUCTION	1-1
2.0	DRAFT EIS MODIFICATIONS	2-1
3.0	PUBLIC REVIEW OF THE DRAFT EIS	3-1
4.0	REFERENCES (<i>UPDATED SINCE SEPTEMBER 14 DRAFT EIS</i>)	4-1

APPENDIX A PROJECT MONITORING AND MITIGATION PLAN

APPENDIX B APPLICANT CORRESPONDENCE

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1.0 Introduction

This Final Environmental Impact Statement (EIS) for the Rossi Mine Expansion Project (Project) presents updates to the Draft EIS (Chapter 2) resulting from public and cooperating agency comments received during the 45-day public review period. Chapter 3 of this Final EIS presents information on the public Draft EIS review meetings held for the Project and the public and cooperating agency comments received and responses to substantive comments. Chapter 4 presents references cited in this Final EIS.

The Draft EIS for the Project was distributed for public review and comment on September 14, 2018. The BLM held two public meetings to receive comments during the 45-day public comment period which ended on November 5, 2018. Public meetings to present information on the proposed Project and gather public comments were held at the BLM offices in Battle Mountain, Nevada (October 3, 2018 from 4:30 pm to 6:30 pm) and Elko, Nevada (October 4, 2018 from 4:30 pm to 6:30 pm).

Minor edits to the Draft EIS have been made in response to public comments in order to provide clarification or further information (Chapter 2). None of the public comments received resulted in major changes or revisions to the Draft EIS. The Draft EIS has not been reprinted. Therefore, this abbreviated Final EIS must be read in conjunction with the Draft EIS (September 2018). For specific details on impacts to resources, the reader is referred to the Draft EIS.

The Monitoring and Mitigation Plan (Mitigation Plan) for the Project is presented in Appendix A. The Mitigation Plan describes all of the required measures to mitigate potential impacts from the Project, and describes the required monitoring. Appendix B contains a letter from Halliburton Energy Services (HES) regarding off-site compensatory mitigation.

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2.0 Draft EIS Modifications

This chapter contains specific modifications and updates to the Project Draft EIS published in September 2018. These revisions have been made in response to comments received by the BLM during the 45-day public comment period from September 14 through November 5, 2018. **Table 2-1** identifies specific text revisions. Additions of new text and any modifications appear in ***bold italic*** print and deleted text appears with a ~~strike-out~~ line through the text. Revised tables are presented in their entirety following **Table 2-1**.

Table 2-1. Modifications and Updates to the Draft EIS

Draft EIS Section Number	Page	Paragraph	Line(s)	Revised Text
1.5.2	1-6	4	NA ²	<i>The Rossi Mine Expansion Project, which is located in Elko County with the exception of approximately 21 miles of existing access road that is located in Eureka County, may or may not be consistent with the Eureka County Master Plan, which includes the following items: a) mitigation of mining activities that may impair the economic future of Eureka County citizens; b) use of the best available science and technology to ensure adequate protection of land, air, and water resources...[including]... adequate and proper mitigation; c) maintaining water resources in a condition that will render it usable by future generations for the full range of beneficial uses that further a viable and stable economic and social base for its citizens; d) maintain or improve soil, vegetation and watershed resources in a manner that perpetuates and sustains a diversity of uses while fully supporting the custom, culture, economic stability and viability of Eureka County and our individual citizens; e) prevention of significant deterioration of the superior air quality found in Eureka County; and f) maintain, improve, or mitigate...impacts to habitat in order to sustain viable and harvestable populations of ...species as well as wetland/riparian habitat for ...other game and non-game species. “The Proposed Action, with implementation of identified Applicant Committed Environmental Protection Measures and other associated mitigation measures, is consistent with the Eureka County Master Plan.” The proposed Project on its own, without this associated mitigation, may not meet consistency such as implementing mitigation to create a net gain for sage grouse habitat prior to implementation of the Project.</i>
1.7	1-7	Table 1-1	13	Memorandum of Agreement for Maintenance of the Boulder Valley Road – County <i>Elko and Eureka Counties</i>

Table 2-1. Modifications and Updates to the Draft EIS

Draft EIS Section Number	Page	Paragraph	Line(s)	Revised Text
3.6	-	-	NA ²	<i>During the preparation of the Draft EIS for the proposed Rossi Mine Expansion Project, members of the Battle Mountain Band of the Te-Moak Tribe of Western Shoshone identified the location of a traditional burial within the Rossi Mine Project area. The BLM is conducting consultation with the Native American Tribes and Bands listed in Table 3.6-1b regarding the treatment of this burial site. Until such time as the BLM hears from these Tribes and Bands regarding this burial site, the BLM will not know to what level of involvement the Tribes and Bands will have in the treatment of the burial site, if at all. The BLM will develop a treatment plan for this burial site based on the information it receives from the Tribes and Bands. The treatment plan will also follow the Native American Graves Protection and Repatriation Act (NAGPRA) and BLM policy and guidance. See table 3.6-1b for a summary of the consultation efforts.</i>
3.10	-	-	NA ²	<i>The livestock industry is considered to be both an exporter and importer to the local economies of Elko, Eureka and Lander Counties. The livestock industry is an exporter because of the sale of cattle products to the nation or world and an importer to the local economy through jobs and taxes (e.g. property and sales taxes). According to the Economic Analysis of the Food and Agricultural Sector in Nevada for 2017 (Nevada Department of Agriculture 2017 Report), the total economic contribution of the livestock industry on Nevada's economy was estimated to be \$755,000,000, including both direct and backward linked indirect economic activities resulting from the livestock industry. The total employment impact on the economy was 3,962 jobs with a total labor income of \$154,000,000. The value-added multiplier was 1.8, meaning that every dollar invested in Nevada's livestock production stimulates \$0.80 in additional economic activity in the state. According to this report, every 10 jobs directly related to the livestock industry supports an additional 12 jobs in the state. From the years 2010 to 2015, the cattle and calf industry value of inventory in Nevada was approximately \$748,000,000. During 2015, there were 205,307 animals shipped to several different states. Approximately 78 percent of the cattle moved were shipped to five major destinations. These major destinations are states where more than 10,000 animals of all types are received.</i>

Table 2-1. Modifications and Updates to the Draft EIS

Draft EIS Section Number	Page	Paragraph	Line(s)	Revised Text
				<p><i>Approximately 20 percent of all cattle moved were shipped to six minor destinations. Minor destinations are classified as states that receive between 2,000 and 10,000 animals of all types. Based on the Nevada Department of Agriculture (NDA) brand inspection data, the major destination states were California, Idaho, Nebraska, Colorado, and Arizona. The minor destination states were Wyoming, Utah, Oregon, Texas, Kansas, and Washington. California and Idaho accounted for approximately 54 percent of all cattle movement from Nevada in 2015. Five counties in Nevada (Elko, Lyon, Humboldt, Churchill, and Nye) shipped more than 70 percent of all animals directly to these destinations. These counties also account for more than 70 percent of the livestock population in Nevada. According to this report, most ranches in Nevada are still family owned. Some of them sell their cattle to large industrial feedlots and slaughter/packing houses. Cattle produced in Nevada are generally shipped out of state for processing. Based on the data reported from the brand inspector in 2015, more than 91 percent of the animals moved to processing outside of Nevada were shipped to the major state destinations previously mentioned. The direct economic impacts are the expenditures the industry makes to the local economy, which for the cattle and calf industry includes all expenditures made to produce meat. Indirect economic impacts are expenditures made by entities that sell goods and/or services to livestock processors such as trucking companies, equipment manufacturers, suppliers, veterinary services, and financial institutions. All of these activities added together provide an estimate of the overall economic impact, household earnings, and jobs supported by the cattle and calf industry in Nevada. In 2015, the total economic impact of the cattle and calf industry on Nevada's economy was estimated at \$642,000,000, including both direct and backward linked indirect economic activities resulting from the livestock industry. The total employment impact on the economy was 3,431 jobs with a total economic impact of \$125,000,000. The value added multiplier was 1.9, meaning that every dollar invested in the Nevada cattle and calf production industry stimulates \$0.90 in additional economic activity in the state. According to this report, for every 10 jobs directly related</i></p>

Table 2-1. Modifications and Updates to the Draft EIS

Draft EIS Section Number	Page	Paragraph	Line(s)	Revised Text
				<p>to the cattle and calf production industry, an additional 12 jobs are supported in the state. In 2015, Elko County's total value of agriculture sector output was \$159,600,000 which accounted for 3.9 percent of the total county production output. The largest industries contributing to agriculture production were beef cattle ranching and farming (\$95,400,000), other crop farming including hay (\$15,600,000) and dairy cattle and milk production (\$14,900,000). These industries accounted for more than 79 percent of Elko County's agriculture sector output. In 2015, Eureka County's agricultural sector output's total value was \$35,100,000 accounting for 1.4 percent of the total county production output. The largest contributing industries to agricultural production were all other crop farming including hay (\$17,000,000), beef cattle ranching and farming (\$16,400,000), and support activities for agriculture and forestry (\$1,300,000). These industries account for more than 1.4 percent of Eureka County's agriculture sector output. In 2015, Lander County's total value of agriculture sector output was \$30.7 million accounting for 2.2 percent of the total county production output. The largest agriculture production output values for Lander County were all other crop farming including hay (\$16 million), beef cattle ranching and farming (\$11.8 million) and vegetable and melon farming (\$871,164). These industries account for more than 94 percent of Lander County's total agriculture sector output. Some of the more obvious impacts that affect the livestock industry are: available AUMs on federal and private land, herd size, use of alternative AUM sources to mitigate effects of losses of AUMs, other available sources of feed for cattle such as hay (grazed or purchased), amount of federal land a permittee uses for grazing, changes to grazing management on federal lands, wildland fires removing available vegetation (AUMs), precipitation-climate changes producing vegetation and available forage, livestock prices, vegetation yield, competition with wildlife and other animals, changes in administrative policies on federal land, authorized uses on the land, sales versus demand for livestock/food occurring in the economy, and carrying capacity estimates of the land. The livestock industry is cyclic and influenced by consumer preferences and demands in the industry, and the number of</p>

Table 2-1. Modifications and Updates to the Draft EIS

Draft EIS Section Number	Page	Paragraph	Line(s)	Revised Text
				<i>producing ranches. It is complex to calculate the actual direct and especially the indirect factors that affect the livestock industry.</i>
3.16	3.16-1	1	1	The title of Section 3.16 has been updated to 3.16 Grazing Management .
3.16	-	-	NA ²	<i>The permittee for the T Lazy S and Mary's Mountain Allotments is Elko Land and Livestock. These two Allotments are located in Eureka County, but they are not impacted or affected by the Rossi Mine Expansion Project. The Boulder Field Allotment, which is located in Eureka County is not impacted or affected by the Rossi Mine Expansion Project. The permittee for the Boulder Field and Tuscarora Allotments is Rhoades Ranch LLC. The Tuscarora Allotment is not affected by the Rossi Mine Expansion Project. Mining in the Tuscarora Allotment ended in the early 1990s. The old pit, which is located on private land, is fenced and excludes grazing. The range of projected active animal unit months (AUMs) lost as a result of the analysis is from 93 to 272 for the Twenty Five Allotment (Table 3.16-2 in the DEIS).</i>
3.17 and 3.18	-	-	NA ²	<i>Between the publication of the Draft EIS on September 14, 2018 for the public comment period and the preparation of the abbreviated Final EIS, the BLM issued a new Instruction Memorandum (IM-2019-018) describing its compensatory mitigation policy on December 6, 2018. The Draft EIS for the Rossi Mine Expansion Project complies with this new BLM instruction memorandum IM-2019-018.</i>
3.18	3.18-8	4	37	<i>On March 15, 2019, the BLM approved revisions to the 2015 GRSG Amendment including updates to the habitat management area boundaries (BLM 2019). Previous habitat management area boundaries and acreages analyzed in the 2018 Rossi Mine Expansion Draft EIS were developed using habitat modeling results of Coates et al. (2014). The revised GRSG Amendment includes updated habitat management areas developed using the habitat modeling results of Coates et al. (2016). Table 3.18-2 has been revised to include the updated habitat management area acreages from Coates et al. (2016). See revised Table 3.18-2 below. The revised 2016 habitat map illustrates the fact that PHMA sage grouse habitat shifted to the south within the proposed Rossi Mine PoO</i>

Table 2-1. Modifications and Updates to the Draft EIS

Draft EIS Section Number	Page	Paragraph	Line(s)	Revised Text
				<i>boundary, which increased the acreage of PHMA by approximately 12 percent and decreased the acreage of GHMA by approximately 32 percent within the Project Area..</i>
3.18	3.18-12	-	-	<i>Figure 3.18-3b has been included to present a comparison of greater sage-grouse habitat management areas within the proposed Project Area. See Figure 3.18-3b below.</i>
3.18	3.18-19	4	NA ²	<i>Under the Reconfiguration Alternative, 899 acres of PHMA and 116 acres of GHMA would be disturbed by the short term impacts of mine construction and operation using the 2016 habitat management categories. These acres of disturbance would be reclaimed at the completion of mining activity. In addition, 131 acres of PHMA and 13 acres of GHMA (2016 management categories) would be permanently removed under the Reconfiguration Alternative as a result of the open pits that would not be backfilled or reclaimed.</i>
3.18	3.18-24	-	Table 3.18-6	<i>Table 3.18-6 has been revised to include 2016 GRSG habitat management categories. See revised Table 3.18-6 below.</i>
3.19.1.2	-	-	NA ²	<i>According to the Eureka County Road Map dated 11/21/2005, Recorder's Certificate #201710, the Boulder Valley Road (#237) is designated as a minor road and is 21.73 miles long in Eureka County. Road number 237 is titled Boulder Valley Road on this Eureka County Road Map, which is the same road described correctly as the Boulder Valley Road in the DEIS. The Eureka County Road Map illustrates that the minor Eureka County Road #237A is titled Rodeo Flat. The Rodeo Flat Road is the road that provides access from the Carlin Mine through the Barrick Goldstrike Mine and intersects the Boulder Valley Road at the Bootstrap and Arturo Mine area. The Rodeo Flat Road is accessed from Carlin Nevada and its intersection with Boulder Valley Road is in the vicinity of the Arturo and Bootstrap Mines instead of being accessed from the Dunphy Nevada area. Approximately 5.5 miles of the Boulder Valley Road is located in Elko County from the Eureka-Elko County line to the Rossi Mine.</i>
4.3	4-4	2	1-2	<i>The following agencies, businesses, organizations, and individuals were included on the BLM's mailing list for scoping of the Rossi Mine Expansion Project—contacted during the preparation of the Draft EIS. These entities were</i>

Table 2-1. Modifications and Updates to the Draft EIS

Draft EIS Section Number	Page	Paragraph	Line(s)	Revised Text
				<i>sent the Dear Interested Party letter and the scoping fact sheet describing the project. These entities were notified about the project during the scoping process for the preparation of the Draft EIS.</i>
5.1	5-1	Table	-	<i>NEPA Coordinator - Terri Dobis</i>
5.3	5-2	Table	3-6	Haynes Boone Legal Council <i>Counsel</i>
Appendix A	A-5	Table	SSS 2B Line 3 Notes	To ensure the prevention of unnecessary and or undue degradation of public lands, the proponent...
Appendix A	A-23	1	3	The BLM, HES, and NDOW have coordinated to identify two parcels of BLM managed public land located near the existing Rossi Mine for the voluntary implementation of habitat enhancements outlined in this plan for both mule deer and greater sage-grouse.

¹ Paragraph number includes the first partial paragraph at the top of a page.

² The paragraph in its entirety is a new addition of text and therefore is not attributed to line numbering in the DEIS.

Revised Table 3.18-2. Existing Acreage of Greater Sage-grouse Habitat Management Categories within the Rossi Mine Study Area

Habitat Type	August 2014 Map (acres)	March 2015 Map (acres)	2016 Map (acres)	Acre Change/ Percent Change (2014 to 2016)
PHMA	2,712	2,657	3,040	+328 / 12%
GHMA	1,019	1,074	691	-328 / -32%
OHMA	-	-	-	-
Total	3,731	3,731	3,731	0 / 0%

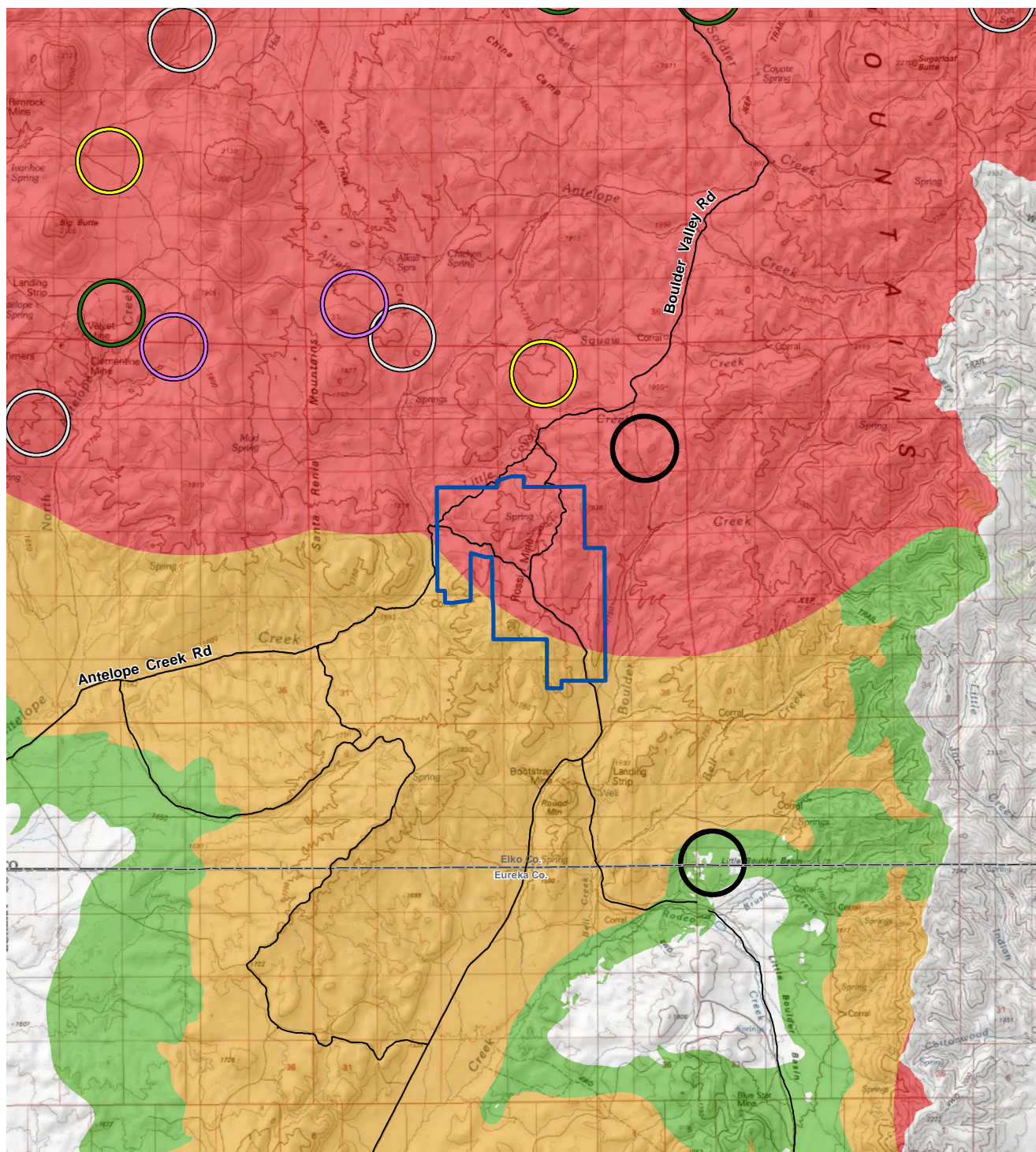
Sources: Coates et al. 2014; Coates et al. 2015, Coates et al. 2016.

Revised Table 3.18-6 Summary of Greater Sage-grouse Habitat Reconfiguration Alternative Impact Acreages

Habitat Category	Existing Acreage within Study Area¹	Reconfiguration Alternative Temporary Impact¹ (acres)	Reconfiguration Alternative Permanent Impact¹ (acres)	Reconfiguration Alternative Impact Total¹ (acres)
<i>2014 Habitat Management Categories</i>				
PHMA	2,712	653	86	739
GHMA	1,019	219	58	277
OHMA	-	-	-	-
2014 Habitat Total	3,731	872	144	1,016
<i>2015 Habitat Management Categories</i>				
PHMA	2,657	662	91	753
GHMA	1,074	210	53	263
OHMA	-	-	-	-
2015 Habitat Total	3,731	872	144	1,016
<i>2016 Habitat Management Categories</i>				
PHMA	3,040	769	131	900
GHMA	691	103	13	116
OHMA	-	-	-	-
2016 Habitat Total	3,731	872	144	1,016

¹ Numbers have been rounded to the nearest integer, totals may vary due to rounding.

Sources: Coates et al. 2014; Coates et al. 2015, Coates et al. 2016.



- Project Study Area
- Greater Sage-grouse Cumulative Effects Study Area
- Area within 1/2 Mile of Greater Sage-grouse Leaks (Status)**
- Active
- Inactive
- Pending
- Unknown

Source: BLM 2015a, BLM 2015g, SRK 2014a, Coates et al. 2016.

- Greater Sage-grouse Management Categories (2016)**
- Priority Habitat Management Area (PHMA)
- General Habitat Management Area (GHMA)
- Other Habitat Management Area (OHMA)

Rossi Mine Expansion Project EIS

Figure 3.18-3b
Greater Sage-grouse Habitat in the Project Study Area

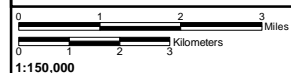


Table 3.6-1b provides a summary of consultation and information sharing between Native American Tribes and the BLM since the publishing of the Rossi Mine Expansion Draft EIS. The BLM is preparing a Memorandum of Agreement (MOA) between the BLM and State of Nevada Historic Preservation Office (SHPO) to address the treatment of the eligible historic properties located within the Rossi Mine project area. Development and preparation of this MOA follows the BLM policy and guidance.

Table 3.6-1b. Native American Consultation and Information Sharing Timeline Summary Updates

Name of Tribe/Band	Date of Communication	Summary of Communication
Battle Mountain Band Council	July 12, 2017	The BLM and the Battle Mountain Band Council engaged in the initial discussions regarding the treatment for the burial site at the July 12, 2017 meeting. As a result of the discussions, the Battle Mountain Band Chairperson and councilman would like to see the BLM develop the Action Plan for the treatment of the burial site, but not implement the Action Plan until it is necessary. (See Table 3.6-1 in the Draft EIS for the consultation efforts for the Project).
Duckwater Shoshone Tribe	December 12, 2018	The BLM phoned the Chairman who was not available so a message was left informing him that the BLM would be sending a formal letter inviting the Tribe to consult on the treatment for the burial site at the Rossi Mine Project. This phone call was a preliminary invitation to consult on the treatment of the burial site.
Confederated Tribes of the Goshute Indian Reservation (CTGR)	December 12, 2018	The BLM phoned the Chairman to notify CTGR that the BLM would be sending a formal letter inviting the Tribe to consult on the treatment for the burial site at the Rossi Mine Project. This phone call was a preliminary invitation to consult on the treatment of the burial site.
Shoshone-Bannock Tribes of the Fort Hall Indian Reservation	December 12, 2018	The BLM emailed the Language and Cultural Preservation Office to request assistance in notifying the Chairman that the BLM would be sending a formal letter inviting the Tribes to consult on the treatment for the burial site at the Rossi Mine Project. This contact was for a preliminary invitation to consult on the treatment of the burial site.
South Fork Band	December 12, 2018	The BLM phoned the Chairperson to notify the Band that the BLM would be sending a formal letter inviting the Band to consult on the treatment for the burial site at the Rossi Mine Project. This phone call was a preliminary

Table 3.6-1b. Native American Consultation and Information Sharing Timeline Summary Updates

Name of Tribe/Band	Date of Communication	Summary of Communication
		invitation to consult on the treatment of the burial site.
Wells Band	December 12, 2018	The BLM phoned the Chairperson to notify the Band that the BLM would be sending a formal letter inviting the Band to consult on the treatment for the burial site at the Rossi Mine Project. This phone call was a preliminary invitation to consult on the treatment of the burial site.
Duckwater Shoshone Tribe	December 13, 2018	The Chairman of the Tribe returned a phone call to the BLM that he did receive the message left on his phone on December 12, 2018.
Battle Mountain Band	December 17, 2018	The BLM met in-person with the Chairman of the Battle Mountain Band and notified him that the BLM would be sending a formal letter inviting the Band to consult on the treatment for the burial site at the Rossi Mine Project. This meeting was a preliminary invitation to consult on the treatment of the burial site.
Te-Moak Tribe of Western Shoshone	December 17, 2018	The BLM met in-person with the Chairman of the Tribe and notified him that the BLM would be sending a formal letter inviting the Tribe to consult on the treatment for the burial site at the Rossi Mine Project. This meeting was a preliminary invitation to consult on the treatment of the burial site.
<ul style="list-style-type: none"> • Te-Moak Tribe of Western Shoshone • Battle Mountain Band • Elko Band • South Fork Band • Wells Band • Confederated Tribes of the Goshute Indian Reservation • Ely Shoshone Tribe • Fort McDermitt Paiute Shoshone Tribes of Nevada and Oregon • Shoshone-Bannock Tribes of the Fort Hall Indian Reservation 	February 6, 2019	The BLM sends a formal letter to the Tribes and Bands inviting them to consult on the treatment of the burial site at the Rossi Mine Project. The letter requests that the Tribes and Bands notify the BLM by March 8, 2019 as to whether or not they would like to participate in formal government-to-government consultation on the treatment of the burial site.

Table 3.6-1b. Native American Consultation and Information Sharing Timeline Summary Updates

Name of Tribe/Band	Date of Communication	Summary of Communication
<ul style="list-style-type: none"> Shoshone-Paiute Tribes of the Duck Valley Indian Reservation Timbisha Shoshone Tribe of Death Valley Yomba Shoshone Tribe Pyramid Lake Paiute Tribe Duckwater Shoshone Tribe 		
<ul style="list-style-type: none"> South Fork Band 	March 5, 2019	The BLM attended the regular open Council meeting and reminded the Vice Chairman about the February 6, 2019 letter regarding the burial site at the Rossi Mine.
<ul style="list-style-type: none"> Te-Moak Tribe of Western Shoshone 	March 6, 2019	The BLM met with the Chairman and environmental program manager and reminded them about the February 6, 2019 letter regarding the burial site at the Rossi Mine.
<ul style="list-style-type: none"> Confederated Tribes of the Goshute Indian Reservation 	March 8, 2019	The BLM attended the regular open Council meeting and reminded the Chairman about the February 6, 2019 letter regarding the burial site at the Rossi Mine.
<ul style="list-style-type: none"> Shoshone-Bannock Tribes of the Fort Hall Indian Reservation 	March 13, 2019	The BLM received a letter from the Cultural Resources/Heritage Tribal Office in response to the February 6, 2019 letter regarding the burial site at the Rossi Mine. Shoshone-Bannock Tribes defer to the Battle Mountain Band for the purposes of this NAGPRA notification.
<ul style="list-style-type: none"> Duckwater Shoshone Tribe 	March 18, 2019	The BLM phoned the Chairman to follow up with him on the February 6, 2019 letter regarding the burial site at the Rossi Mine.
<ul style="list-style-type: none"> Yomba Shoshone Tribe 	March 18, 2019	The BLM phoned the Chairman to follow up with him on the February 6, 2019 letter regarding the burial site at the Rossi Mine. The Chairman was unavailable and the BLM left a message.
<ul style="list-style-type: none"> Shoshone-Paiute Tribes of the Duck Valley Indian Reservation 	March 18, 2019	The BLM phoned the Cultural Resources Director to follow up with her and the Chairman on the February 6, 2019 letter regarding the burial site at the Rossi Mine. She will follow up with the Chairman.

Table 3.6-1b. Native American Consultation and Information Sharing Timeline Summary Updates

Name of Tribe/Band	Date of Communication	Summary of Communication
<ul style="list-style-type: none"> Timbisha Shoshone Tribe of Death Valley 	March 18, 2019	<p>The BLM phoned the Chairwoman to follow up with her on the February 6, 2019 letter regarding the burial site at the Rossi Mine. The Chairwoman was unavailable. The BLM left a message. The Chairwoman returned the call to the BLM and requested the BLM continue to keep the Timbisha Shoshone apprised of the Project as it progresses.</p>

3.0 Public Review of the Draft EIS

The 45-day public comment period on the Draft EIS began on September 14, 2018 and ended on November 5, 2018.

BLM held open house meetings at the BLM Elko District Office on October 4, 2018 and at the BLM Battle Mountain District Office on October 3, 2018. A total of nine people signed the attendance sheets available at the meetings. Attendees at the meeting in Elko Nevada included representatives from Halliburton, the BLM, NDOW, and U.S. House of Representative Mark Amodei's office. In addition, three members of the general public attended the meeting in Battle Mountain Nevada. No comments were received during the public meetings.

BLM received a total of eight comment letters during the comment period. Each letter was reviewed and 42 discrete comments were identified. **Table 3-1** lists each of the comment letters by assigned letter number, commenter, date of receipt, and the number of comments per letter.

Table 3-1. Summary of Public Comment Letters

Letter Number	Commenter	Date of BLM Receipt	Number of Comments
Federal Agencies			
F1	U.S. EPA	11/2/2018	13
Nevada State Agencies			
S1	NDEP-BWPC	10/30/2018	2
S2	NDEP-BAPC	10/30/2018	2
S3	NDWR	10/30/2018	5
S4	NDOW	11/5/2018	9
S5	State Land Use Planning Agency	10/30/2018	1
Local Governments			
L1	Eureka County Board of Commissioners	10/28/2018	9
Private Individuals			
P1	Jean Public	9/14/2018	1

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Table 3-2 presents individual comments on the Draft EIS received during the 45-day public comment period and the BLM response.

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
F1	F1-1	U.S. EPA	<p>Groundwater levels in the regional bedrock aquifer of the northern Carlin Trend have been declining for several decades due to dewatering at the numerous open pit gold mines in the area. The dominant drawdown cone in the project area is from Barrick Gold Corporation's Goldstrike Mine, located four miles to the south of the Rossi Plan of Operations (PoO) boundary. According to monitoring results briefly summarized in the DEIS, groundwater drawdown within the Rossi PoO area currently ranges from 300 feet in the south to 10 feet in the north-effectively dewatering the Rossi operations. This dewatering effect closely links groundwater management actions at Goldstrike to operations at Rossi. According to the DEIS, Goldstrike plans to cease dewatering in 2021, which is expected to result in recovery of groundwater levels. As a result, it is likely that one or more pit lakes would form at the site of the proposed Rossi operations.</p> <p>Recommendation: Due to the influence that Goldstrike dewatering operations have on water levels within the Rossi PoO area, EPA recommends that the FEIS expand the groundwater level analysis to include a synthesis of Goldstrike dewatering scenarios for the steady-state post closure period.</p>	<p>The date of 2021 to cease dewatering at the Goldstrike Mine is based on the best available published information from the last modification for the Goldstrike Mine in 2008, the Betze Pit Expansion Project. Barrick's Arturo Mine Plan was approved in 2014, which was analyzed in the Arturo EIS. This analysis also used the date of 2021 for dewatering to cease at the Goldstrike Mine. As described in the Arturo Mine Project EIS Chapter 3.4, the modeling continues to predict that once Barrick ceases dewatering groundwater recovery would begin in the deep carbonate formation. It would take a period of 100 to 170 years for pit lakes to form at Arturo and approximately 400 years for the groundwater recovery to reach steady state. Barrick continues to mine at both the Goldstrike Mine and Arturo Mine based on the approved plans. Barrick is required on an annual basis to provide information to the State of Nevada and the BLM by means of the Boulder Valley Monitoring Plan. Per recent discussions between Barrick and the BLM, mining operations would continue at both the Goldstrike and Arturo Mines past the year 2021. The BLM assumes that as a normal business practice, Barrick would continue to assess the viability of the Goldstrike and Arturo Mines in order to extend the mine life as long as possible because of the continued commitments and investments they have made before closing an operation. It is not necessary for the Rossi FEIS to include a synthesis of the Goldstrike dewatering</p>

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
				<p>scenarios for the steady-state post closure period because groundwater is being removed from two different levels and at different magnitudes. Barrick is dewatering at an average rate of 18,000 to 19,000 gallons per minute (gpm) from 11 dewatering wells around the Betze Pit (Boulder Valley Monitoring Plan (BVMP) 4th Quarter 2016-1st Quarter 2017) and from the deeper levels of the carbonate layer of the regional groundwater aquifer (deep carbonate rock hydrostratigraphic unit). At the Rossi Mine, currently a maximum of 3,500 gpm is required for the jigging operation and the maximum average pumping rate is 40-46 gpm (Table 3.4-4 of the DEIS) from production wells that are 400 to 2,000 feet below the ground surface (Marine Clastic Rock layer). Production water at the Rossi Mine is also supplemented by Barrick hauling water from the Betze Mine to the Rossi Mine. Any water seepage into the pits is also recycled and used in the mine operations at the Rossi Mine. The Rossi production wells produce approximately 1 percent as much groundwater compared to what Barrick is producing from its mine dewatering operation. Even if Barrick quit dewatering in year 2021, the latest pit lake study for the Arturo Mine states it will still take 100 to 170 years for the groundwater rebound and 400 years for the groundwater to reach steady state conditions. Once HES installs the water conservation system at the Rossi Mine for the jigging operation less water will be utilized. See Section 2.2.7.9 in the DEIS. No change was made to the document to address this comment.</p>

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
F1	F1-2	U.S. EPA	Monitoring and Mitigation (M &M) Measures and Potential for a Pit Lake - EPA is concerned that the data and modeling predictions used to develop the threshold elevations at which monitoring and mitigation (M&M) requirements would be triggered are not sufficiently described in the DEIS. The Rossi DEIS does not present any project-specific modeling but relies, instead, upon results from the 2008 Betze Pit Expansion Draft Supplemental EIS and the Goldstrike Boulder Valley Monitoring Program (BVMP), which only peripherally includes the area around Rossi. These data are shown in the context of regional groundwater drawdown (Figure 3.4-6), which does not allow the reader to compare the threshold elevations with predicted recovery water levels for the post-closure period. Based on these limited data, the DEIS (Section 3.4) indicates that expansion and deepening of the King and Queen Lode pits under the proposed action are expected to extend below the pre-mining water level, resulting in formation of one or more pit lakes in the post-closure period and, possibly, during mining operations.	Figure 3.4-11 and Figure 3.4-13 use data from HES for the Rossi Mine to illustrate that a pit lake is likely to develop in the west lobe of the King Pit and in the proposed QLC Pit if these pits are not backfilled. To clarify, the Monitoring and Mitigation measures were developed with the “threshold” elevations to prevent mining below the elevation where it is most likely that pit lakes would develop in both the King and QLC Pits prior to obtaining the information to actually determine if a pit lake would occur due to a lack of information. Therefore, the basic approach was taken to compare the pre-dewatering groundwater elevation with the proposed pit bottom elevation (See Figure 3.4-11 and Figure 3.4-13). In comparing the pre-dewatering groundwater elevation with the proposed pit bottom elevation, these figures illustrate that a pit lake is likely to occur in each of the pits. The “threshold” elevation value for mining in each pit was developed because if the pits are mined below these levels, it is very likely to result in a pit lake and above these levels a shallow pit lake would develop in a defined area of each pit provided dewatering ceased at the Goldstrike Mine and the groundwater table suddenly rebounded. No change was made to the document to address this comment.
F1	F1-3	U.S. EPA	Section 3.4.4 of the DEIS describes four M&M measures that have been developed to address the potential for pit lake development. The measures are proposed to be completed before mining occurs below threshold elevations representing	These monitoring and mitigation measures were developed once it was discovered that the data is not currently available for HES to mine below the “threshold” elevations of 5,420 feet above mean sea level (amsl) at the King Pit or 5,480 feet amsl

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			the predicted pre-mining conditions. Measures WR-1, WR-2 and WR-3 are analytical activities necessary for purposes of understanding existing and predicted conditions and evaluating the project's potential water quality impacts. For this reason, it is unclear why these analyses have not already been conducted and the information discussed in the DEIS.	at the QLC Pit. During the preparation of the EIS, it was discovered that information was lacking regarding the issue of determining what the potential was for pit lakes to develop as a result of the proposed mining action. HES temporarily shut down the Rossi Mine and laid-off its employees due to the economics of the barite industry. Instead of stopping the preparation of the EIS, the BLM moved forward to finish the document and complete the permitting process. Since it takes time to obtain the missing data for a pit lake study, the potential mitigation and monitoring measures were developed to be able to obtain the information once HES begins operations again. HES can implement the monitoring and mitigation measures while mining to obtain the data to conduct the pit lake study. Once these measures are implemented it takes time to collect the data and prepare a study. As HES mines these two pits they would be collecting data and confirming data to be used in the pit lake study. No change was made to the document to address this comment.
F1	F1-4	U.S. EPA	The DEIS (p. 3.4-50) states that, "available data suggest that the potential for development of pit lakes with low pH, or high metals concentrations appears to be low." While the geochemical testing data do not indicate the potential for an acidic pit lake, those data do suggest that the water quality within the potential pit lake[s] would likely exceed certain primary and secondary standards under circum-neutral conditions. Groundwater samples from monitoring wells exceed secondary drinking water standards for iron and manganese.	The potential monitoring and mitigation measures were developed to obtain data for a pit lake study. No change was made to the document to address this comment.

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			Humidity cell testing (HCT) data from waste rock (a reasonable proxy for the majority of rock exposed within the shell of the pit) exceed Nevada Department of Environmental Protection (NDEP) reference values for aluminum, arsenic, and iron. Meteoric Water Mobility Procedure (MWMP) test values for the King waste rock exceed the secondary aluminum standard of 0.2 mg/L; and mercury in the Queen waste rock (0.0051) exceeds the primary standard of 0.002 mg/L. These analytical results highlight the importance of characterizing the physical location of groundwater and limiting contact with, and migration of, pit lake water.	
F1	F1-5	U.S. EPA	Recommendations: 1) Conduct M&M measures earlier and incorporate the results into the FEIS.	During the preparation of the EIS, HES temporarily shut down the Rossi Mine due to economics of the barite industry. Instead of stopping the preparation of the EIS, the BLM has moved forward to finish the document and complete the permitting process. Since it would take several months to a few years to obtain the data needed for the pit lake study, the potential monitoring and mitigation measures were developed. The potential monitoring and mitigation are reasonable measures to obtain the additional information that is needed to conduct a pit lake study. As stated in the DEIS, the measures listed in section 3.4.4 would be implemented to obtain the missing data prior to HES mining these two pits to the depths at which the pit lakes would develop. The limitations on the depth of mining in the pits are designed to prevent mining below the elevation where the pit lakes would definitely occur prior to developing a

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
				pit lake study and conducting more environmental analysis if it is determined to be necessary. In the future, if HES needed to deepen the pits and/or require dewatering, these actions could require a plan amendment and new NEPA analysis. Therefore, no change was made to the information in the DEIS.
F1	F1-6	U.S. EPA	1A) Conduct measures WR -1 and WR-2 as soon as possible so that additional monitoring data can be evaluated and included in the FEIS to inform decision making.	The measures WR-1 and WR-2 were developed to allow mining to occur or the mine to operate while the data is being obtain for the area below the "threshold" elevations. It takes time (e.g. months to years) to obtain the data. No change was made to the document to address this comment.
F1	F1-7	U.S. EPA	1B) If completing WR-1 and WR-2 as described in Section 3.4.4 does not provide sufficient information, or yields results that are not conclusive enough to complete WR-3, consider adding additional monitoring locations.	Revisions to monitoring programs are dynamic and revisions are conducted when warranted. Therefore, when additional monitoring wells are needed, additional monitoring wells would be installed. The locations of monitoring wells are based on the monitoring results, data collected and hydrologic understanding of the area. No change is made to the DEIS. See the final mitigation plan in the abbreviated Final EIS.
F1	F1-8	U.S. EPA	1C) Identify, in the FEIS, the most practicable preemptive WR-4 option to avoid contaminated groundwater or formation of a pit lake. Discuss how implementation of this measure would be financially assured for as long as it would be needed.	All of the options stated in WR-4 are practicable or viable options to avoid contaminating groundwater or the formation of a pit lake. Groundwater modeling and pit lake studies can be utilized as useful predictive tools, but they are dynamic and require continued updating with real data obtained during the mining operation. The amount of the financial guarantee or a long-term

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
				trust is not subject to NEPA analysis, but is part of the enforcement program for the 43 CFR 3809 regulations. No change was made to the document to address this comment.
F1	F1-9	U.S. EPA	2) Alternatively, describe in the FEIS and Record of Decision how these measures would be incorporated as enforceable requirements in the PoO, whether a tiered NEPA document would be needed to address the findings and inform a decision to modify the PoO, and how the cost of implementing WR-4 would be assured in the reclamation plan and/or long-term post-closure financial instrument.	The amount of the financial guarantee or a long-term trust is not subject to NEPA analysis, but is part of the enforcement program for the 43 CFR 3809 regulations. No change was made to the document to address this comment.
F1	F1-10	U.S. EPA	3) Provide, in the FEIS: 1) A water level contour map for the projected water table after recovery, overlaid upon final pit geometries. Compare and, if appropriate, refine the threshold elevations used in Section 3.4.4. 2) A table or figure of water levels in the Rossi area that were used to calibrate the steady- state pre-mining condition model, and a comparison of those levels with the predicted recovery water levels described above, to evaluate the range of uncertainty.	Figure 3.4-11 and Figure 3.4-13 illustrate that a pit lake is likely to develop in the west lobe of the King Pit and the proposed QLC Pit, if not backfilled. The information in these figures is a comparison of the steady state groundwater elevation prior to the dewatering at the Betze Mine and the proposed pit bottom elevation, which clearly illustrates the potential for the pit lakes. The potential monitoring and mitigation measures were developed to obtain data that are not available for the area below the threshold elevations for the King and QLC pits. These data would be used to develop a pit lake study. No change was made to the document to address this comment.

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
F1	F1-11	U.S. EPA	<p>Monitoring and Mitigation Measures for Groundwater Encountered During Mining: Section 3.4.4 states that there is: "...a potential for groundwater to flow into the western lobes of the King Pit and QLC Pit during mining and/or after closure under the Proposed Action and Reconfiguration Alternative." Limited on-site water level monitoring data indicate that relying upon pre- mining threshold elevations to trigger monitoring and mitigation does not fully address the potential for groundwater inflow and/or pit lake development during mining. Furthermore, observed water levels in production and monitoring wells on the property suggest that groundwater is compartmentalized into informally defined "upper" and "lower" units that are not identified in the BVMP or the Betze Pit Expansion modeling used to develop the thresholds. Figure 3.4-11, Figure 3.4-13, and Section 3.4 show that mining operations have the potential to intersect the "upper" units in both the King and QLC pits prior to deepening the pits below the threshold elevations. Taken together, these lines of evidence suggest that existing groundwater monitoring at the site is not sufficient to characterize the volume of water, nor the timing of influxes that may be encountered during mining. If groundwater seeps into the active pits, continued mining will require active management of the seepage water. The DEIS does not describe how such water would be managed.</p>	<p>When groundwater seepage into the pits occurs, HES utilizes the water on site for the operations such as the jigging process instead of obtaining water from the production wells. No change was made to the document to address this comment.</p>

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
F1	F1-12	U.S. EPA	Recommendations: 1) In the FEIS, include additional monitoring and mitigation actions to address groundwater inflow during operations. EPA encourages passive management strategies wherever possible to prevent the need for long-term, post-closure operation and management of any pit lake water. To develop a comprehensive management strategy, evaluate: A) the potential need for dewatering, using triggers developed from data collected during actions detailed in WR -1; B) the potential impacts to groundwater levels, additional surface disturbance, the need for additional permitting, and availability of water rights associated with re-infiltration of dewatering water, if necessary; C) the need for, and feasibility of, an in-pit sump and/or initial treatment pond to reduce the risk of ecological exposure; and D) pit wall stability concerns, and potential measures that may be needed during operations in the event that pit walls develop active seeps.	When groundwater seeps into the active pits, HES uses the excess water in its mining operations such as the jigging process instead of obtaining water from the production wells. When the pit lake study is developed and prepared, EPA's management strategy recommendations will be considered. No change was made to the document to address this comment.
F1	F1-13	U.S. EPA	Funding for Long Term Post-Closure Management: WR-4 includes four potential pit lake mitigation strategies: "1) reduction in the depth of open pit mining or partial pit backfilling to preclude pit lake development; 2) utilizing treatment options such as adding amendments to modify pit lake water quality concentrations; 3) measures designed to reduce exposure pathways or receptor access; and 4) other appropriate measures as approved by the BLM and NDEP." The difference in cost among these options is significant, and whether they would be covered	The amount of the financial guarantee or a long-term trust is not subject to NEPA analysis, but is part of the enforcement program for the 43 CFR 3809 regulations. No change was made to the document to address this comment.

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			under the reclamation bond or a post-closure financial instrument would depend upon which option is selected. The efficacy of post-closure in-pit water treatment depends upon the treatment selected and the adequacy and availability of an appropriate funding mechanism, potentially in perpetuity. Recommendations: If long-term post-closure pit lake management would be needed, evaluate, in the FEIS the pit lake mitigation options, their costs, appropriate funding mechanisms, and their effectiveness in protecting water and wildlife resources.	
S1	S1-1	NDEP-BWPC	The project may be subject to BWPC permitting. Permits are required for discharges to surface waters and groundwaters of the State (Nevada Administrative Code NAC 445A.228). BWPC permits include, but are not limited to, the following: Stormwater Industrial General Permit, De Minimis Discharge General Permit, Pesticide General Permit, Drainage Well General Permit, Temporary Permit for Discharges to Groundwater's of the State, Working in Waters Permit, Wastewater Discharge Permits, Underground Injection Control Permits, Onsite Sewage Disposal System Permits, Holding Tank Permits. Please note that discharge permits must be issued from this Division before construction of any treatment works (Nevada Revised Statute 445A.585). For more information on BWPC Permitting, please visit our website at: http://ndep.nv.gov/bwpc/index.htm .	It is the responsibility of HES to contact Federal, State, and local agencies to obtain the necessary permits and be informed of the applicable laws and regulations pertaining to its business and Project. No change was made to the document to address this comment.

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
S1	S1-2	NDEP-BWPC	Additionally, the applicant is responsible for all other permits that may be required, which may include, but may not be limited to: Dam Safety Permits - Division of Water Resources, Well Permits - Division of Water Resources, 401 Water Quality Certification – NDEP, 404 Permits - U.S. Army Corps of Engineers, Air Permits – NDEP, Health Permits - Local Health or State Health Division, Local Permits - Local Government	It is the responsibility of HES to contact Federal, State, and local agencies to obtain the necessary permits and be informed of the applicable laws and regulations pertaining to its business and Project. No change was made to the document to address this comment.
S2	S2-1	NDEP-BAPC	The Nevada Division of Environmental Protection – Bureau of Air Pollution Control (BAPC) requires that a surface area disturbance permit be submitted to clear, excavate, or level 5 acres or more of land per Nevada Administrative Code (NAC) 445B.22037. Exceptions to this regulation include agricultural activities occurring on agricultural land or surface disturbances authorized by permits issued pursuant to NRS 519A.180 which occur on land which is not less than 5 acres or more than 20 acres.	It is the responsibility of HES to contact Federal, State, and local agencies to obtain the necessary permits and be informed of the applicable laws and regulations pertaining to its business and Project. No change was made to the document to address this comment.
S2	S2-2	NDEP-BAPC	This project already acknowledges the need for the applicant to obtain a surface area disturbance permit so they are aware of this requirement. The permit application should be submitted to the BAPC.	It is the responsibility of HES to contact Federal, State, and local agencies to obtain the necessary permits and be informed of the applicable laws and regulations pertaining to its business and Project. No change was made to the document to address this comment.

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
S3	S3-1	NDWR	All Nevada water laws must receive full compliance.	It is the responsibility of HES to contact Federal, State, and local agencies to obtain the necessary permits and be informed of the applicable laws and regulations pertaining to its business and Project. No change was made to the document to address this comment.
S3	S3-2	NDWR	All water used on a project must be permitted by the State Engineer's Office.	It is the responsibility of HES to contact Federal, State, and local agencies to obtain the necessary permits and be informed of the applicable laws and regulations pertaining to its business and Project. No change was made to the document to address this comment.
S3	S3-3	NDWR	Wells and Boreholes - Water wells must be permitted, Monitor wells require a Waiver from the State Engineer's Office, and boreholes must be plugged within sixty (60) days after being drilled as required by NAC 534.4371. For the plugging of boreholes, all boreholes require a 20-foot surface plug by placing concrete grout, cement grout or neat cement from 20 feet below the surface to the surface, in addition to all other plugging requirements mandated by NAC 534.4371.	It is the responsibility of HES to contact Federal, State, and local agencies to obtain the necessary permits and be informed of the applicable laws and regulations pertaining to its business and Project. No change was made to the document to address this comment.
S3	S3-4	NDWR	Any drillholes (water or monitor wells or boreholes) that may be located on either acquired or transferred lands are ultimately the responsibility of the owner of the property and must be plugged and abandoned as required in Chapter 534 of the Nevada Administrative Code.	It is the responsibility of HES to contact Federal, State, and local agencies to obtain the necessary permits and be informed of the applicable laws and regulations pertaining to its business and Project. No change was made to the document to address this comment.

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
S3	S3-5	NDWR	Dams - Any person proposing to construct a dam, reconstruction or alteration of old structures in this state shall, before beginning construction, obtain from the State Engineer a permit to appropriate, store and use the water to be impounded by or diverted by the dam. If the proposed dam is or will be 20 feet or more in height, measured from the downstream toe to the crest of the dam, or is less than 20 feet in height and will impound more than 20 acre-feet of water, must submit to the State Engineer in triplicate plans and specifications thereof for his approval in accordance with Nevada Revised Statue Chapter 535 and Nevada Administrative Code Chapter 535 prior to construction is to begin.	It is the responsibility of HES to contact Federal, State, and local agencies to obtain the necessary permits and be informed of the applicable laws and regulations pertaining to its business and Project. No change was made to the document to address this comment.
S4	S4-1	NDOW	Rossi Exploration-HES, BLM and NDOW collaborated throughout the development of the Rossi mine expansion project to minimize impacts to migrating mule deer, yet no protection measures have been identified for exploration activities. All the phasing and backfilling could all be for nothing if seasonal timing restrictions aren't employed during the mule deer migration periods for exploration activities, as well.	The Elko Resource Area Resource Management Plan is silent regarding seasonal timing restrictions for mule deer. In section 3.17.4.2, Mitigation Measure WL-2 addresses the issue of impediments to mule deer migration within the migration corridor. A statement to address exploration activities has been added to the final mitigation measure WL-2. See the Final Mitigation plan in Appendix A of the FEIS.
S4	S4-2	NDOW	Figure 3.17-8- This figure doesn't depict what could truly be on the landscape in terms of a remaining corridor. As of recent, Barrick has provided the BLM with an amendment to the Arturo plan in which their waste rock dump will extend to the southern boundary of Rossi. This modification to the Arturo plan will restrict the	When the BLM receives a proposal under the 3809 regulations for a modification to a plan of operations, the BLM must process that proposal per the regulations. Due to the government shut down and Barrick's timeframe for implementing a change to the Arturo waste rock disposal facility design, Barrick submitted a letter to the BLM

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			mule deer migration corridor beyond what is depicted in this figure. Additional constraints to the mule deer migration corridor will be an added stress to the migrating deer that hasn't been analyzed within this document. From NDOW's perspective, Halliburton has provided significant design modifications and have proposed a phased approach to accommodate mule deer migration in the presence of their mining impacts, yet their adjoining neighbors [Barrick] have not taken the same level of effort to accommodate mule deer migration, thereby reducing the benefit Haliburton's efforts.	dated January 16, 2019, withdrawing the Arturo plan amendment for the proposed design change. The letter also states Barrick will continue with the approved plan of operations waste rock disposal facility design. No change was made to the document to address this comment.
S4	S4-3	NDOW	Per NRS 501.105 Mitigation Policy which states, "... procedure lies in the Department's statutory charge that the protection of fish and wildlife values are in the public interest and that proper land use planning, including wildlife input and consideration, can result in a positive protective measure. The overall objective of the Department and this policy is to guide or mitigate those activities which have the potential to adversely impact fish and wildlife resources in Nevada." Further, BLM Instruction Memorandum No.2018-093 Compensatory Mitigation-"...This policy does not affect the ability of any State government or other non-federal party to require or enforce mandatory compensatory mitigation as authorized under state law." NDOW values the sage grouse acres that would be permanently lost at \$600 per acre at a ratio of 3:1 for PHMA and 2:1 for GHMA. The voluntary funds would be	On December 6, 2018, the BLM issued its current policy regarding compensatory mitigation in Instruction Memorandum (IM) 2019-018. That IM directs the BLM to include compensatory mitigation that is required as part of a state plan, program, or authorization in all of the action alternatives in a NEPA analysis. The BLM complied with that requirement, since the BLM, HES, and NDOW discussed potential compensatory mitigation and the Project DEIS included analysis of the CCS and HQT, as well as off-site enhancement of sage grouse habitat. The Project is an expansion of an existing mine, so it cannot be moved to Non-Habitat Management Areas, as defined under the 2014 Nevada Greater Sage-Grouse Conservation Plan. In a letter dated November 2, 2018, HES indicated that it would not voluntarily participate in either the potential off-site compensatory mitigation described in the DEIS or CCS. Once the mine site is reclaimed,

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			utilized for the habitat restoration options identified within the EIS.	<p>habitat would be restored for wildlife, including sage grouse. See DEIS at Appendix A.</p> <p>Under the BLM’s regulations at 43 CFR 3809.420(a)(6), a mining operator is required to conduct all operations in a manner that complies with all pertinent Federal and state laws to prevent unnecessary or undue degradation. The BLM acknowledges that the State of Nevada issued Executive Order 2018-32 (December 7, 2018), which says that the state intends to use the Nevada Sage-Grouse Conservation Plan and the Nevada CCS as the state’s primary mechanism to conserve and ensure conservation of sage grouse and their habitats. It is the responsibility of HES to contact Federal, State, and local agencies to obtain the necessary permits and be informed of the applicable law and regulations pertaining to the Project. Accordingly, HES can contact the State of Nevada to discuss the state’s specific requirements as to CCS or other compensatory mitigation.</p> <p>No change was made to the document to address this comment.</p>
S4	S4-4	NDOW	A-23 the description of the two parcels also mentions mule deer but the parcels for mule deer are different polygons and this statement is confusing. Please clarify.	See Chapter 2 of the Final EIS as the statement in the Draft EIS Appendix A for page A-23, Off-site Compensatory Mitigation Sites, line 3 has been modified to delete the words “for both mule deer and”

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
S4	S4-5	NDOW	It is unclear if HES intends to provide funding for off-site mitigation based on the language in the EIS. It is further unclear if HES were to elect to participate in off-site mitigation if the draft EIS would cover the implementation of the habitat restorations or if additional NEPA would be required. NDOW would prefer to have the EIS analyze the implementation of such mitigation efforts.	In a letter dated November 2, 2018, HES indicated that it would not voluntarily participate in either the potential off-site compensatory mitigation described in the DEIS or CCS. If NDOW wishes to conduct sage grouse mitigation on public lands, it must obtain an authorization for the activities from the BLM or other Federal Agency that has jurisdiction. No change was made to the document to address this comment.
S4	S4-6	NDOW	The mule deer compensatory mitigation identifies the Rooster's Comb Fire as a site for the funds to be implemented on the ground. While we appreciate this approach, the Rooster's Comb fire may not be the most pertinent location for these efforts by the time the Record of Decision would be signed. We suggest the language should be changed to incorporate the latest fires or rather, modify the language to encompass a broader perspective to incorporate fires that, "have impacted the area 6 mule deer herd".	The DEIS at Section 3.17.4 states, "HES's decision to implement compensatory mitigation could include habitat enhancements at the primary off-site habitat enhancement area identified by BLM in coordination with NDOW (Figure 3.17-11)." In a letter dated November 2, 2018, HES indicated that it would not voluntarily participate in either the potential off-site compensatory mitigation described in the DEIS or CCS. No change was made to the document to address this comment.
S4	S4-7	NDOW	NDOW has concerns with the lack of assurances addressing the timelines and activities that will occur within the mule deer migration corridor between Arturo and Rossi. We would encourage the BLM to embrace Secretarial Order 3362 Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors, specifically Section 4 Implementation, b. (5) (v), minimizing development that would fragment winter range and primary migration corridors.	The BLM is fully aware of and has incorporated Secretarial Order 3362. However, when a proposal for a modification to a Plan of Operations is submitted to the BLM under the 3809 regulations, the BLM must process that proposal per the regulations. The BLM was in the process of processing the proposal for the Rossi Mine Expansion Project and the Arturo Modification to the Plan of Operations; however, because of the government shut down and Barrick's timeframe for implementing a change to the Arturo waste rock disposal facility design,

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
				Barrick submitted a letter to the BLM dated January 16, 2019, withdrawing the Arturo plan amendment for the proposed design change. The letter also states Barrick will continue with the approved plan of operations waste rock disposal facility design. No change was made to the document to address this comment.
S4	S4-8	NDOW	This project is over the 3 % disturbance cap, identified in Knick, Steven T., S.E. Hanser, and K.L. Preston's paper: Modeling ecological minimum requirements for distribution of greater sage-grouse leks: implications for population connectivity across their western range, USA. Within this publication it states that 99 % of active leks were in landscapes that had less than 3% development.	The BLM is not required to comply with the 3% disturbance cap in the scientific paper noted by the comment. No change to the document was necessary to address this comment.
S4	S4-9	NDOW	Given the uncertainty of funding sources for NDOW, we propose the following language: 3.17.4.2 Monitoring of Area 6 Mule Deer Movements - potential text change "The project proponent is considering whether to voluntarily assist NDOW in actively monitor mule deer passage through the Rossi Mine area by providing financial assistance for mule deer GPS collars. Under this measure, HES would enter into a cooperative agreement with BLM and NDOW to develop a monitoring plan and cost sharing agreement for the duration of the life of mine extension. NDOW and BLM would work collaboratively to find funding opportunities for the project upon the approval of the Rossi Mine ROD. A copy of the data would be provided to the BLM either in a report or an acceptable	Collaring mule deer is a State Agency, NDOW, activity and under the jurisdiction of NDOW and does not require Federal permitting. The HES letter dated November 2, 2018 states that HES will participate in the voluntary Area 6 Mule Deer monitoring as described in Section 3.17.4.2 of the DEIS. No necessary change to the document was made to address this comment.

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			format determined by the BLM and NDOW. Effectiveness: The effectiveness of this mitigation measure will be dependent on cooperation between the project proponent, BLM and NDOW. If HES elects to participate in the mule deer monitoring plan, implementation of this monitoring plan will help to quantify successful passage of mule deer and any potential changes in migration patterns of mule deer in the vicinity of the Rossi Mine. This action would provide information pertaining to mule deer migration corridors and potentially identify other mitigation measures that may help to ensure the long term persistence of this important mule deer population."	
S5	S5-1	NV State Land Use Planning Agency	Speaking for the State Land Use Planning Agency, please ensure that all lighting, temporary and permanent conforms to Dark Sky lighting mitigation standards as prescribed at www.darksky.org .	See Section 2.3.9.2. HES has developed and will implement a Lighting Management Plan for the Rossi Mine to ensure that potential adverse lighting impacts are minimized to the extent possible without compromising worker safety. Since lighting was already analyzed, no change was necessary to address this comment.
L1	L1-1	Eureka County Commissioners	Eureka County supports Halliburton Energy Services (HES) in their effort to expand operation at the Rossi Mine. We strongly support mining and the benefits that return to Eureka County through mining done right. We seek to be forward-looking and conscientious in balancing economic benefits with environmental and social soundness. We will not support any mining project that does not fully mitigate negative	This comment does not provide new information, so no change was made to the BLM analysis.

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			impacts to Eureka County resources or citizens—even if impacts come to only a few individuals.	
L1	L1-2	Eureka County Commissioners	While the Project is in Elko County, there are potential direct and indirect impacts to Eureka County resources and citizens. Most of the area within the analyses boundaries and more specifically, the Cumulative Effects Study Areas (CESAs) are primarily within Eureka County. The access routes to the Rossi Mine are predominantly in Eureka County. The grazing allotment affected falls partially in Eureka County. The water resources (including water rights) and airshed analyses affect Eureka County. The DEIS on p. 4-4 in Section 4.3 states lists many Eureka County agencies that “were contacted during the preparation of the Draft EIS.” We were not contacted nor coordinated with by BLM on this DEIS in any way other than what was afforded the general public. We were not afforded Cooperating Agency status even though we have met and demonstrated “special expertise” and also have “jurisdiction by law” on the access roads within Eureka County.	The BLM understands the Eureka County Board of Commissioners’ position regarding the Project, and also understands the unique situation this Project encounters regarding Elko and Eureka Counties. It appears that the BLM failed to offer Eureka County Board of Commissioners an opportunity to be a cooperating agency on this Project, which was an inadvertent oversight. Chapter 4, Section 4.3, is a summarized version of the mailing list of the Project’s scoping mailing list. A clarification statement has been provided in Chapter 2 of this abbreviated Final EIS for Chapter 4, Section 4.3 of the Draft EIS.
L1	L1-3	Eureka County Commissioners	The DEIS includes no description or discussion in Section 1.5.2 about consideration of or consistency/conformance with Eureka County’s or the State’s plans, policies, and controls. FLPMA Section 202(c)(9) requires coordination with local governments with respect to the BLM’s “land use inventory, planning, and management activities” and further requires the BLM to provide for “meaningful public involvement” of local government officials, “both	The statements regarding consistency with Eureka County’s plan or policy provided by the Eureka County Board of Commissioners have been added to Chapter 2 of this abbreviated Final EIS for Section 1.5.2 in the DEIS. In regards to the issue of complying with the applicable Eureka County codes and how to strive for consistency with the plans and policies of the Eureka County Master Plan, the BLM encourages HES and Eureka County to open a dialog to discuss this issue. HES

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			<p>elected and appointed” in “the development of land use programs, land use regulations, and land use decisions for public lands....” Obviously, the development of the DEIS constituted a planning and management activity subject to coordination¹. Additionally, the NEPA regulations, specifically 40 CFR 1506.2(d) and 1502.16(c), require NEPA documents to “include discussions of...possible conflicts between the proposed action and the objectives of...local land use plans, policies and controls for the area concerned” and “laws.” Documentation of consistency is required. The DEIS itself must include this discussion required under 40 CFR 1502.16(c) and 1506.2(d) and the March 16, 1981 Memorandum for Federal NEPA Liaisons, Federal, State, and Local Official and Other Persons Involved in the NEPA Process, Questions 23b and 23c. NEPA documents are to “include discussions of...possible conflicts between the proposed action and the objectives of...local land use plans, policies and controls for the area concerned” and “discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law.” These NEPA requirements cannot be met if BLM fails to coordinate with us and complete principled consistency analysis. While ultimately the DEIS and Project may be consistent with our plans and policies, it is not due to coordination by BLM with us to get us there. Below, we highlight the following policies</p>	<p>is aware that it must adhere to Federal, State, and local laws. Eureka County has jurisdiction of implementation of its County Master Plan, not the BLM. A statement has been added to Chapter 2 of this abbreviated Final EIS regarding the Eureka County Master Plan compliance.</p>

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			<p>from our Master Plan, word-for-word, that must always be considered and documented: a. mitigation of mining activities that may impair the economic future of Eureka County citizens; b. use of the best available science and technology to ensure adequate protection of land, air, and water resources ...[including]... adequate and proper mitigation; c. maintaining water resources in a condition that will render it useable by future generations for the full range of beneficial uses that further a viable and stable economic and social base for its citizens; d. maintain or improve soil, vegetation and watershed resources in a manner that perpetuates and sustains a diversity of uses while fully supporting the custom, culture, economic stability and viability of Eureka County and our individual citizens; e. prevention of significant deterioration of the superior air quality found in Eureka County; and f. maintain, improve or mitigate...impacts to habitat in order to sustain viable and harvestable populations of...species as well as wetland/riparian habitat for...other game and non-game species. Please add language to read “The Proposed Action, with implementation of identified Applicant Committed Environmental Protection Measures and other associated mitigation measures, is in conformance with the Eureka County Master Plan.” The proposed project on its own, without this associated mitigation, may not meet consistency. Also, please add “HES would need to comply with applicable Eureka County codes and strive for</p>	

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			consistency with the plans and policies in the Eureka County Master Plan.”	
L1	L1-4	Eureka County Commissioners	Access and Land Use – the last line in Table 1.7, Page 1-7 simply lists “County” as the granting agency for the MOA for the maintenance of the Boulder Valley Road. Please specifically state Eureka County in this table. In Section 3.19.1.2, there is language that the “Boulder Valley Road...is maintained by HES from the Dunphy Plant to the Rossi Mine under a road maintenance agreement with Elko County” (emphasis added). Yet, all but only a handful of miles of the road are in Eureka County, not Elko County. And, there is only a “gentlemen’s agreement” with Eureka County on the road, not an official or formal MOA that we are aware of or have access to or the MOA is stale if there ever was one. In Section 3.19.1.2 and Section 2.2.6.2, please revise to make it clear that the so-called “public access road,” Boulder Valley Road, is in fact an official Eureka County Road that has been accepted as a County road through State Law. It is officially “Boulder Flat Road,” (County Road 237). Please also include statements in the respective sections that HES will definitively develop and implement a road maintenance agreement with Eureka County. The County requires road maintenance agreements with all project proponents that will increase travel and road-wear above customary use. This should be referenced and committed as part of the Proposed Action similar to every other recent mining project we have worked with. In Section 3.19, there is no description or discussion related to Eureka County and only focuses on	A correction has been provided in Chapter 2 of this abbreviated Final EIS to correct Table 1.7 to include both Elko and Eureka Counties. In regards to the designation of the Boulder Valley Road, clarifying information has been incorporated into Chapter 2 of this abbreviated Final EIS for Section 3.19.1.2 of the DEIS. In regards to an MOA for the road maintenance issue, the BLM can require or approve third party agreements for private land actions in some circumstances or situations. However, in this case the BLM encourages Eureka County and HES to open a dialog to discuss the issue of an MOA for road maintenance. Figure 3.19-1 for the Land Use CESA does encompass lands in Eureka County. However the analysis completed in this document did not analyze the resources based on county lines, instead it analyzed the resource based on the defined study area. The information for cumulative impacts analysis for Land Use is located in both Section 3.19 and Section 3.2 of the DEIS. No change was made to the document for the cumulative impacts analysis. Clarification statements have also been added to Section 2.0 Modifications to the Draft EIS in this abbreviated Final EIS.

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			Elko County. Yet, the Land Use CESA (see Figure 3.19-1) is primarily Eureka County, not Elko County.	
L1	L1-5	Eureka County Commissioners	Range Resources/Grazing Management – Table 3.1-2 on Page 3.1-5 outlines the other resources that may be affected which are analyzed in the DEIS. In this Table, the term “Grazing Management” is used but then the related sections in the DEIS use the term “Range Resources.” We strongly advocate for using the consistent term of “Grazing Management” throughout as this more accurately describes the topic being analyzed. Please consider changing all of the headings and references of Range Resources sections to “Grazing Management.” Range resources (more accurately rangeland resources) are much more than just livestock grazing. In fact, by definition, vegetation, water, soils, habitat, etc. are all part of rangeland resources. The Society for Range Management has worked hard for decades to ensure that rangeland resources are not used synonymously with livestock grazing because there are so many more values and uses than just grazing.	A correction has been added to Chapter 2 Modifications to the Draft EIS in this abbreviated Final EIS to change the title of Section 3.16 to Grazing Management.
L1	L1-6	Eureka County Commissioners	Grazing Management – it appears potential AUM reductions due to the Project were calculated based on acreage and average AUMs per acre and not an analysis to determine the actual AUMs on the ground. Potential AUM loss is not a simple math exercise. The analysis must be based on the actual forage potentially lost based on the state of the ecological sites being affected and the accessibility by livestock. AUMs should not be	The preferred alternative as designated in the DEIS is the Reconfiguration Alternative, which projects a temporary loss of 93 AUMs in the Twenty Five Allotment (Section 3.16, Table 3.16-2, page 3.16-4 of the DEIS). The Twenty Five Allotment is permitted for 34,130 active AUMs (Table 3.16-1 of the DEIS), so the temporary loss of AUMs would be minor. If these AUMs are actually reduced, it would have a minor economic

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			<p>reduced for areas where livestock grazing is already limited due to minimal forage, inaccessibility or cheatgrass dominance. Any impact to grazing should be quantified, addressed, and mitigation outlined. BLM is required to outline mitigation that could offset the impact (“relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the agency” BLM NEPA Handbook, p. 62). We also find it disingenuous to speak of impacts of lost AUMs in a percentage of total permitted AUMs as this falsely minimizes impacts. Our County plans and policies require mitigation of lost AUMs regardless of how many. Please frame mitigation to counteract the loss of AUMs, regardless of the number. A few AUMs lost temporarily or forever results in major economic losses over time in addition to reduction of long-term socioeconomic stability and custom and culture tied to ranching. There must be cross-cutting analyses where the reduction in AUMs, even if temporary, is quantified and disclosed in the socioeconomic section too. Please use the same methodology that we worked on for the Mt. Hope EIS, HCCUEP EA, Gold Bar Project EIS, and Deep South EIS (among others) that we believe was adequate and which this DEIS is lacking. For example, consider something similar to the following analysis: Of all the agricultural commodity sales in Eureka County, cattle/calves and sheep/lambs historically average 40% of the sales with most of the remainder made up of export hay. According to the 2007 Census of Agriculture, there was a livestock inventory in</p>	<p>impact to the grazing permittee. However, this direct impact would only affect one grazing permittee, the 26 Corporation, and involve only one Allotment, the Twenty Five Allotment. Implementation of the Reconfiguration Alternative would not cause the AUMs to be suspended as the mine site is not fenced to be able to exclude grazing. A suspension of AUMs would only occur if the BLM would also have to implement the Livestock Fencing Alternative in the future, which would require the mine site to be fenced to exclude livestock grazing around the mining operations. As described in Section 3.16 and Table 3.16-2 the projected active AUMs lost would be 272. Most of the land illustrated in the cumulative effects study area defined in the DEIS for grazing management is not disturbed by mining activities in both Eureka and Elko Counties. Although the mines, which are located in the Carlin Trend, occur mostly in Eureka County, the area affected by the mines is a localized or a defined area, existing mostly of gold mines with surface disturbance created by several mining operations. In the 1990’s the BLM went through the process of permanently reducing or suspending the AUMs for the designated mining operations area from the Carlin Mine to the Bootstrap Mine portion of the Carlin Trend, which is the area where grazing management was most affected by the mining operations in Eureka County. This mining operations area was fenced-off to exclude grazing. Other mining operational areas that have been fenced and excluded from grazing are the Gold Quarry Mine and Arturo Mine, previously known as the Dee Gold Mine,</p>

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			Eureka County of nearly 25,000 head and \$25,015,000 worth of agriculture commodity sales. The 2012 Census of Agriculture highlighted a cattle inventory of 17,092 (the 2012 Census of Ag did not disclose sheep numbers) with \$36,020,000 worth of agricultural commodity sales. Livestock accounts for 40 percent of agriculture commodity sales in Eureka County; therefore, livestock production from 2007 through 2012 was responsible for generating \$10,000,000 to \$14,000,000 worth of product sales in Eureka County annually. The direct and induced benefits of the livestock industry in Eureka County can be determined based upon information contained in the University of Nevada Report: Reno Technical Report UCED 2005/06-14 Updated Economic Linkages in the Economy of Eureka County. The livestock sector in Eureka County has a final demand multiplier of 2.0283. In short this means that for every \$1 generated by the sector Eureka County's economy will benefit \$2.02 of total revenue. The high final demand multiplier suggests strong economic linkages of the livestock sector to other sectors of the county's economy. Income and employment multipliers are also of importance. The livestock sector has an income multiplier of 1.6812 and an employment multiplier of 1.4439. Thus, for every \$1 generated by livestock production, total county household income increases by \$1.68 and for every job added by the livestock sector, total employment in Eureka County increases by 1.44 employees. In 1999 funds were appropriated through the Nevada Legislature to create a	which were also fenced-off in the 1980-1990s, but the grazing permittee did not have a reduction in AUMs as a result of these three mining operation. As a result of the approval of the Arturo Mine, located in Elko County, in 2014, the Arturo Mine fencing was revised, but the affected AUMs were not reduced or suspended. The Hollister Mine is located within the Twenty Five Allotment in Elko County. The Hollister Mine was fenced to exclude grazing around 1990; however, the Twenty Five Allotment did not receive a reduction in AUMs as a result of this mine. To date, the AUMs have not been reduced in the Twenty Five Allotment as a result of the mining operation being fenced or not fenced. The grazing permittees affected by these mining operation grazing exclusion areas have had to adjust to the loss of grazing and/or AUMs within the specific mine areas for at least the last 20 to 30 years since the early 1990s. To date, the Rossi Mine has not been fenced to exclude grazing from the mine operational area and although the mine has existed since 1947 the Twenty Five Allotment has not encountered a reduction of AUMs as a result of the mining operations within this Allotment. Although the Reconfiguration Alternative for the Rossi Mine Expansion Project would create a projected temporary loss of 93 AUMs, it is a relatively minimal cumulative loss of AUMs to the grazing allotments in the cumulative effects study area and therefore, does not change the analysis.

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			<p>Nevada Public Land Grazing Database and Economic Analysis. In 2000, the Nevada State Department of Agriculture asked the Nevada Association of Counties to assist in fulfilling this mandate. Resource Concepts, Inc. was contracted to help complete the database and analysis. The product of this effort is the report, Nevada Grazing Statistics Report and Economic Analysis for Federal Lands in Nevada (Resource Concepts, Inc. March 26, 2001). Table 3 of the Report (p. 48) summarizes the economic impacts of 1 AUM of grazing in Nevada as follows: For every AUM lost (or gained), the overall impact to the livestock producer himself in one year equals \$29.40. The total economic impacts, which include the industry impacts and value-added impacts, totaled to \$53.40 per AUM (\$29.40 direct and \$24.00 in indirect and induced impacts). These figures do not take into account inflation since 1999. Based on data reported from the Bureau of Labor Statistics for each year since 1999 through 2017, the average rate is approximately 3% per year. Therefore, applying a rate of 3% each year since 1999 gives a 2017 value of one AUM to the producer around \$50.00 and the entire local economy around \$80.00. The economic impact of reducing, temporarily and permanently, the AUMs quantified in the DEIS would cumulatively result in thousands of dollars of impact to the rancher and the local economy. The incremental loss of economic value adds up and is substantial over time and should not be dismissed, especially in the context of cumulative impacts. Over the years, hundreds of AUMs have been lost in the CESA due to mining activity</p>	

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			where each individual mining action on its own have been “minimal” based on the respective NEPA documents but cumulatively are substantial.	
L1	L1-7	Eureka County Commissioners	<p>Water Resources – Our contract hydrogeologist assisted with review of the water related portions of the DEIS. No analysis of drawdown was completed for the proposed production wells. Based on the small production rates and low hydraulic conductivity, the DEIS concluded “. . . it is reasonable to assume that the drawdown within this aquifer would be localized such that it would not likely extend outside the perimeter of the proposed PoO boundary” (pg. 3.4-39). We tested this conclusion by performing a simple Theis analysis. Assumptions included:</p> <ul style="list-style-type: none"> • Aquifer hydraulic conductivity, K – 0.01 to 0.05 feet/day • Aquifer Transmissivity, T – 30 to 800 feet²/day • Aquifer coefficient of storage, S – 0.0001 to 0.004 (confined aquifer) • Pumping rate, Q – 64.5 gpm (for each of the 3 new wells or a total of 192.5 gpm) <p>Because the new well locations are not identified in the DEIS, for the analysis it was assumed three wells in a line, located 500 feet apart. (akin to the existing wellfield). Drawdown was calculated for each hypothetical production well and for two synthetic observations wells located 1,000 and 2,000 feet perpendicular from the line of wells opposite the middle well. A series of simulations were performed assuming a range of transmissivity values. The initial simulation assumed a Transmissivity of 400 FT²/day,</p>	<p>The wells installed at the Rossi Mine are for water production for the jigging process and not for the purpose of dewatering the mine site. According to the Boulder Valley Monitoring Plan (dated February 2018), the regional water table was drawn down by a total of 38 feet since the end of 2016 as a result of the dewatering occurring at the Goldstrike Mine and Leeville property. In 1992 monitoring well NA-2 was installed in the southern part of the Rossi Mine Expansion Project Area for the Boulder Valley Monitoring Plan. Since the installation of this monitoring well NA-2 in 1992 until December 2017 the water level has been drawn down a total of approximately 23 feet and since 2013, the water level elevation in this monitoring well has remained relatively steady. The available data presented in Chapter 3 illustrates that a pit lake is very likely to occur in the west lobe of the King pit (Figure 3.4-11 in the DEIS) and proposed QLC pit (Figure 3.4-13) if these pits are not backfilled. The measures described under Section 3.4.4 Potential Monitoring and Mitigation are reasonable measures to obtain the additional information that is needed to conduct a pit lake study. As stated in the DEIS the measures listed in Section 3.4.4 would be implemented to obtain the missing data prior to HES mining these two pits to the depths at which pit lakes would develop. Although the process of completing the</p>

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			<p>(representative of the mid-point of the assumed range for the marine clastic rock aquifer) and Storage Coefficient of 0.004 (representative of the upper end of the range). After pumping a combined rate of 192.5 feet for 8 years, drawdown 1,000 feet from the middle well is calculated to be approximately 100 feet and approximately 90 feet a distance of 2,000 feet. Increasing Transmissivity to 800 FT²/day (the upper end of the range) decreases drawdown 2,000 feet from the wells to approximately 45 feet. Decreasing Transmissivity to 100 FT²/day causes the solution to “blow up” due to excessive drawdown in the pumped well. If the Transmissivity is near the low end of the range, additional wells almost certainly will be needed or more water may be need to be trucked from Goldstrike. This magnitude drawdown is not trivial and suggests drawdown likely may propagate beyond the PoO boundary. Consequently, the EIS should include an analysis similar to the one above and provide a range of likely drawdown effects. The DEIS concludes “The substantial depth to water bgs [below ground surface] indicates that the water table within the clastic rock aquifer is not connected to the surface water ponds or spring sites and associated perennial flow identified on site.” This conclusion seems justifiable. Table 3.4-14 from the DEIS compares projected pit bottom elevation with estimated groundwater elevations. From the Table there is a potential the elevation of the bottoms of the King Pit expansion and the QLC pits to extend below the water table and for the development of a pit lake upon completion of</p>	<p>EIS has been ongoing, Halliburton has been temporarily shut down due to the current economics of the barite industry. Instead of stopping the preparation of the EIS, the BLM has moved forward to finish the document and complete the permitting process. Although data was lacking to confirm that pit lakes would form in both the west lobe of the King pit and the QLC pit if not backfilled, the available groundwater and pit floor elevation data comparison that is illustrated in the Figures 3.4-11 and 3.4-13 clearly shows that a pit lake is very likely to occur. Since HES is currently permitted to backfill the King pit to prevent pit lakes and the QLC pit has not been mined to create the pit lake situation without being permitted, the potential mitigation measures stated in the DEIS were developed as reasonable measures to collect the data to develop a pit lake study and address these pit lakes situations while the project would be implemented. The limitations on the depth of mining in the pits are designed to prevent mining below the elevation where the pit lakes would definitely occur prior to developing a pit lake study and conducting more environmental analysis if it is determined to be necessary. In the future if HES needed to deepen the pits and require dewatering, these actions could require a plan amendment and new NEPA analysis. Therefore, no change was made to the information in the DEIS.</p>

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			<p>mining. However, groundwater conditions at the Rossi Mine are complex and not well understood. Consequently, whether or not pit lakes will develop is still uncertain. The DEIS states “...although the water quality of potential pit lakes that may develop under the Proposed Action cannot be currently predicted using available information, review of available data suggest that the potential for development of pit lakes with low pH, or high metals concentrations appears to be low.” However, no geochemical modeling to test this hypothesis was performed. There are two perennial seeps within the PoO that issue from the toe of waste dumps. They supply short perennial stream reaches and riparian zones down gradient of the waste dumps. Both of these seeps/seem to be related to springs that were covered by the waste dumps years ago. Meteoric water falling on and infiltrating the waste rock may also contribute to the discharge. This is likely to continue. The DEIS concludes on page 3.4-62 that:</p> <p>“No residual impacts are anticipated for surface water or groundwater resources. The existing streams are ephemeral and the contributing watershed areas are comparatively small and/or already disturbed. Control of process fluids and stormwater would be required and monitored according to state and federal permits. Impacts to groundwater supplies would be localized and recover over time after groundwater withdrawal ceases at mine closure.”</p> <p>Overall, this statement is probably generally true, but given admittedly relatively limited data regarding the hydrogeologic conditions at the</p>	

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			<p>Rossi Mine, important issues have not been resolved. Chief among these are:</p> <ul style="list-style-type: none"> • No analysis of drawdown impacts from pumping was provided in the DEIS, only a hunch that pumping wells would not cause drawdown in the aquifer beyond the PoO boundary. A simplistic Theis analysis of pumping an additional 192.5 gpm for 8 years assuming aquifer properties proffered in the DEIS indicates drawdown within the area of the PoO in the neighborhood of 45 to 100 feet and that drawdown at the PoO boundary might be expected. While this is not likely to result in impacts to groundwater or surface-water resources or water-dependent resources, the DEIS should not blow off the possibility of some fairly large drawdown arising from the project. • The DEIS indicates there is a possibility that two small pit lakes may form. While it discloses this possibility, the DEIS should incorporate the data collection and analyses addressed in Section 3.4.4 before, not after, a Record of Decision. 	
L1	L1-8	Eureka County Commissioners	<p>Greater Sage-Grouse – Neither Section 1.5.2 (Relationship to State Plans) or the sage grouse discussion beginning on page 3.18-7 include consideration of and consistency with the State of Nevada Greater Sage Grouse Plan. The MOU between BLM and the State requires BLM to include analysis of the Conservation Credit System (CCS) and Habitat Quantification Tool (HQT) as an alternative in every single EA or EIS where impacts (even if indirect) to sage grouse are identified. We advocate for pairing for consistency with the State Plan. It is clear that the</p>	<p>The Rossi Mine Expansion Project is in conformance with the BLM's Elko RMP and both the 2015 and revised 2019 ARMPA, which had significant input from the State of Nevada prior to its adoption. See DEIS, Section 1.5. The agency issued its Record of Decision on the revised 2019 ARMPA in March 2019.</p> <p>On December 6, 2018, the BLM issued its current policy regarding compensatory mitigation in Instruction Memorandum (IM) 2019-018. That</p>

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			<p>State Plan was intended to implement a process to mitigate ALL impacts to sage grouse. The State Plan applies regardless of use of the CCS. Further, the DEIS for the updated BLM Land Use Plan Amendment that recently underwent the public comment period made it clear that BLM is seeking to align sage grouse management with the State Plan. Analysis and discussion about consistency with the State Plan must be included in this EA to meet the mandates of 40 CFR 1502.16(c) and 1506.2(d) where it is required to “include discussions of...possible conflicts between the proposed action and the objectives of...local land use plans, policies and controls for the area concerned” and “discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law.” In the sage grouse discussion (beginning on page 3.18-7 and extending through the entire chapter) please describe the current LUPA process to amend the 2015 Plans for alignment with State Plans. Please also describe the remand from Nevada Federal District Court that required BLM to develop a Supplemental EIS for public input regarding certain habitat designations. Note that Eureka County and the habitat designations here were primary reasons why the Court remanded the EIS (we were one of three counties found to have standing). The DEIS analyzes impacts to sage grouse “habitat” simply by areas that may be mapped as sage grouse habitat. It needs to be</p>	<p>IM directs the BLM to include compensatory mitigation that is required as part of a state plan, program, or authorization in all of the action alternatives in a NEPA analysis. The BLM complied with that requirement, since the BLM, HES, and NDOW discussed potential compensatory mitigation and the Project DEIS included analysis of the CCS and HQT, as well as off-site enhancement of sage grouse habitat. The Project is an expansion of an existing mine, so it cannot be moved to Non-Habitat Management Areas, as defined under the 2014 Nevada Greater Sage-Grouse Conservation Plan. In a letter dated November 2, 2018, HES indicated that it would not voluntarily participate in either the potential off-site compensatory mitigation described in the DEIS or CCS. Once the mine site is reclaimed, habitat would be restored for wildlife, including sage grouse. See DEIS at Appendix A and Appendix B in this FEIS.</p> <p>Under the BLM’s regulations at 43 CFR 3809.420(a)(6), a mining operator is required to conduct all operations in a manner that complies with all pertinent Federal and state laws to prevent unnecessary or undue degradation. The BLM acknowledges that the State of Nevada issued Executive Order 2018-32 (December 7, 2018), which says that the state intends to use the Nevada Sage-Grouse Conservation Plan and the Nevada CCS as the state’s primary mechanism to conserve and ensure conservation of sage grouse and their habitats. It is the responsibility of HES to contact Federal, State, and local agencies to obtain the necessary permits and be informed of</p>

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			clarified the complete acreage is not, in fact, on the ground, real sage grouse habitat and ground truthing would show that much of the area is not true sage grouse habitat.	the applicable law and regulations pertaining to the Project. Accordingly, HES can contact the State of Nevada to discuss the state's specific requirements as to CCS or other compensatory mitigation. No change is necessary in the DEIS.
L1	L1-9	Eureka County Commissioners	Section 4.0, Consultation and Coordination – as stated above, it is incorrect to state that all of the Eureka County agencies listed “were contacted.” Further, there is no such entity as the “Eureka County Public Land Advisory Commission.”	The Dear Interested Party letter for the Eureka County Public Land Advisory Commission was delivered and not returned to the BLM as undeliverable so thank you for this information. The BLM will remove Eureka County Public Land Advisory Commission from the mailing list for this and other projects. No changes to the document were necessary to address this comment.
P1	P1-1	Jean Public	:this is a horrific proposal. this is national land owned by 326 million americans, all of whom want it to stay national land. we dont want it used for this profiteers cheap way to make billions of dolalrs. let this cmpany buy private land for their business. this is nothing but a giveaway with the american people losing, maybe the wild horses will be losing too.no wonder blm wants them allkilled and slaughtered. they are taking eveyr bit of nevada land away from our wildnesss. we dont want that. tell the rossimine to go to he..you know where. this is noting but a giveaway with the american people being taken for a ride. ti s a scam. a true sam on the american people. its a taking for no good reason. we want our national land for wildlife and protection for it and for nature. not for the profiteering of this profiteers.	This comment does not provide new information. No changes to the document were necessary to address this comment.

Table 3-2. Public Comments Received on the Rossi Mine Expansion Project Draft EIS and BLM Responses

Letter Number	Comment Number	Commenter	Comment	Response
			deny this appliation. this comment is for the public record. please receipt. jean publiee jean public1@yahoo.com	

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4.0 References *(Updated since September 14 Draft EIS)*

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ROSSI MINE EXPANSION PROJECT
FINAL ENVIRONMENTAL IMPACT STATEMENT (EIS)

APPENDIX A
PROJECT MONITORING AND MITIGATION PLAN

A.1 Introduction

This Monitoring and Mitigation Plan (“Plan”) further elaborates on the monitoring, mitigation and conservation measures referenced in the resource sections of the environmental impact statement (EIS) prepared for the Rossi Mine Expansion Project (Project). The monitoring and mitigation measures discussed in this Plan cover the range of impacts of the proposed Project. The Plan may not address monitoring or mitigation for impacts already addressed by the applicant committed protection measures described in the EIS. In response to comments received on the DEIS, and further evaluation, this plan revises and provides detail for certain monitoring and mitigation measures that were described in the DEIS, and proposes certain additional monitoring and mitigation measures not originally included in the DEIS. Some contingent mitigation measures may require further permitting or National Environmental Policy Act (NEPA) analysis at the time of design and prior to implementation.

The CEQ Regulations (40 CFR §§1500-1508) for Implementing the Procedural Provisions of NEPA define mitigation (40 CFR §§1508.20) as follows:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action;
- (b) Minimizing impacts by limiting the degree of magnitude of the action and its implementation;
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or
- (e) Compensating for the impact by replacing or providing substitute resources or environments.

A.2 Monitoring and Mitigation Measures

The following sections describe monitoring and mitigation measures associated with the environmental impacts identified in the Rossi Mine Expansion Project Draft EIS. The description of each monitoring and mitigation measure identifies the potential impact addressed by the measure, a description of the measure, and the measure’s effectiveness.

Geology and Minerals

Potential impacts to geology and minerals would be minimized by the following recommended mitigation measures. These mitigation measures would apply to the Proposed Action, Reconfiguration Alternative, and Preferred Alternative.

Issue: Geotechnical designs for the waste rock disposal facilities (WRDFs) were not available for review as part of this EIS. The WRDFs are likely to contain material derived from the Carlin Formation that may be relatively weak and depending on their locations within the facilities could be unstable.

Mitigation Measure GM-1: Proposed WRDFs would be designed, constructed, monitored, and maintained in a stable manner during both the operation and post-mining periods. Geotechnical investigations and stability analyses would be performed to demonstrate that these facilities

would be properly designed and remain stable under both static and seismic loading conditions. The analyses would include an evaluation of the potential for these facilities to contain relatively weak material derived from the Carlin Formation. This evaluation would include estimated volumes of low strength materials in each facility and consider options for isolating or blending as necessary to meet slope stability requirements. The minimum factors of safety for all slope designs would be determined as part of the permits, inspections, and approvals granted by the BLM and Nevada Division of Environmental Protection (NDEP). During final reclamation the slope segments would range from 2.5:1 to 3:1 with an overall desired total slope of 3:1, but some overall total slopes may vary over the WRDF with a range from 2.5:1 to 3:1 in order to provide for stability and conform to the natural landscape.

Effectiveness: Proper design, construction, and maintenance of the facilities outlined in this mitigation measure would effectively minimize potential impacts associated with facility stability during the operation and post-mining periods.

Water Resources and Geochemistry

Issue: Review of limited groundwater elevation data in the vicinity of the proposed expansion of the King Pit and proposed QLC Pit suggests that there may be a potential for groundwater to flow into the western lobes of the King Pit and QLC Pit during mining and/or after closure under the Proposed Action and Reconfiguration Alternative. Depending on the inflow rates, groundwater inflows combined with runoff from the pit wall and direct precipitation may potentially provide sufficient flow to result in the development of pit lakes in one or both of the pits.

Four monitoring and mitigation measures (WR-1, WR-2, WR-3 and WR-4) are outlined below to address the potential for pit lake development or groundwater flow through backfill in portions of the pits. Prior to mining below the “threshold” elevations of 5,420 feet above mean sea level (amsl) elevation at the King Pit or 5,480 feet amsl elevation at the QLC Pit, the BLM would require that mitigation measures WR-1 and WR-2 would be completed to evaluate if a pit lake is likely to develop in one or both of the pits. If the results of WR-1 and WR-2 indicate that pit lakes are likely to develop then additional measures outlined in WR-3 and if necessary WR-4 would be completed as required by the BLM. The results and associated data and reports of the monitoring and mitigation measures (including monitoring, aquifer testing, pit lake evaluation, pit water quality predictions, ecological risk assessment and proposed mitigation plans) would be submitted to the BLM and NDEP for review. The BLM’s approval would be required to allow for any mining below the threshold elevations in either the King Pit or QLC Pit. When operations resume at the Rossi Mine after the current temporary shutdown, HES would develop the plan, procedures and/or protocol(s) and begin implementation of measures WR-1 and WR-2 within the first year, but not to exceed two years, of the implementation of the Proposed Action, Reconfiguration Alternative or Preferred Alternative in order to prevent future delays in permitting (e.g. data collection, further NEPA analysis, etc.).

WR-1: Supplemental Groundwater Monitoring and Aquifer Testing

Prior to mining below the threshold elevation of 5,420 feet amsl for the King Pit or 5,480 feet amsl for the QLC Pit, HES would construct at least one or more additional groundwater

monitoring wells within or in close proximity to the western lobes of each pit. The purpose of the wells would be to 1) further define the groundwater elevations in the vicinity of the deepest portions of each pit; and, 2) conduct aquifer testing to further characterize the hydraulic properties of the bedrock aquifer to be encountered in the lower portions of the pits. For planning purposes, the completion depth of the wells should extend to approximately 100 feet below the planned deepest pit floor elevation. Since groundwater monitoring programs are dynamic, HES would install or construct more groundwater monitoring wells as warranted or needed to obtain data to facilitate and illustrate a complete and accurate picture for the pit lake study, groundwater modeling, and continued groundwater monitoring.

WR-2: Pit Lake Evaluation

The supplemental groundwater monitoring and aquifer testing data collected as outlined in WR-1 would be combined with other available data for the site to further evaluate if there is a potential for a pit lake to develop in one or both of the pits in the post-closure period. This evaluation would consider both existing conditions and projected fully recovered groundwater conditions in the post-mining period. If this evaluation determines that there is a potential for a pit lake to develop in one or both of the pits, then additional analysis (groundwater flow modeling or spreadsheet modeling) would be performed using methodology approved by the BLM to estimate the size, volume, surface elevation of the pit lake(s), lake surface area, and evaporative losses over time, and groundwater inflow and outflow of the pit lake(s) during pit filling and after the pit lake(s) approach steady-state conditions.

WR-3: Pit Lake Water Quality Evaluation

If the results of WR-2 predict that a pit lake would likely develop in one or both of the pits in the post-closure period, a hydrochemical model would be developed for the project to estimate water quality in the pit lake(s) over time as the pit fills and approaches steady-state conditions. The pit lake hydrochemical modeling would include inputs and reactions known to occur within pit lakes. These factors include, but are not limited to, the quality and quantity of groundwater inflow and outflow; chemical releases from oxidized wall rock and any waste rock material that may be used as backfill in the pit; aqueous chemical reactions in the pit lake; evaporation from the pit lake surface; direct precipitation into the lakes; and runoff from the pit walls. The results of the modeling would be used to predict pit lake water quality at representative points in time in the future as the lakes develop. The results of pit lake water quality predictions would be further evaluated to determine if the pit water quality poses any risk to adversely affecting downgradient groundwater quality; or adversely affecting human, terrestrial or avian life. This subtask would include incorporating the predicted pit lake water quality into a Screening Level Ecological Risk Assessment (SLERA) to determine if the pit lake water has the potential to adversely impact terrestrial or avian life.

WR-4: Pit Lake Mitigation

If the results of the analyses outlined in WR-3 predict that the pit lake water quality could potentially result in an adverse effect to down gradient groundwater quality, or adversely affect human, terrestrial or avian life, mitigation measures would be implemented to reduce or eliminate potential adverse effects. The mitigation measures implemented would depend on the

pit lake water quality predictions and could range from 1) reduction in the depth of open pit mining or partial pit backfilling to preclude pit lake development; 2) utilizing treatment options such as adding amendments to modify pit lake water quality concentrations; 3) measures designed to reduce exposure pathways or receptor access; and 4) other appropriate measures as approved by the BLM and NDEP. In addition, if the analyses outlined in WR-2 predicts that pit lake development is likely in either the King Pit, or QLC Pit, or both, potential impacts to water rights from long-term evaporation from the pit lake surface(s) would be mitigated by HES reserving sufficient post-mining water rights for the evaporative losses as determined in consultation with the Nevada Division of Water Resources (NDWR).

Effectiveness: Conducting the additional monitoring as outlined in WR-1 combined with the pit lake water quantity and quality analysis outlined in WR-2 and WR-3, and implementation of one or more mitigation measures as outlined in WR-4 (if necessary) would effectively eliminate or minimize the potential adverse impacts to down gradient groundwater quality, or other potential adverse impacts to human, terrestrial or avian life; and potential impacts to water rights.

Cultural Resources

Unavoidable adverse effects to known archaeological historic properties identified within the direct effects Area of Potential Effects (APE) would be mitigated in accordance with a BLM and State Historic Preservation Office (SHPO) approved historic properties treatment plan (HPTP). Archaeological historic properties that would be affected by the Project within the indirect effects APE may also receive monitoring and mitigation if necessary. Any previously unknown archaeological historic properties that may be discovered during construction activities would be treated with a BLM and SHPO approved HPTP. These include the implementation of treatment plans approved by the BLM and SHPO for sites that cannot be avoided through the redesign of mine features and for data recovery, as well as monitoring of those sites for which the BLM determines monitoring is required. Further, the BLM would establish a buffer or exclusion zone around each archaeological site eligible for the National Register of Historic Places (NRHP). The standard avoidance buffer zone would be 30 meters; however the BLM may change the avoidance buffer or exclusion zone and determine a smaller minimum distance to use as a site specific avoidance buffer or exclusion zone on a case-by-case basis. Additionally, the BLM would require monitoring by a third party cultural resources management firm to be conducted on an annual basis at the historic properties that have not undergone treatment and, if monitoring reveals that any of these historic properties have experienced damage, treatment would be performed within the first year after discovery of damage. No additional monitoring or mitigation measures are proposed for this resource.

The potential burial site would undergo treatment or data recovery, the procedures implemented would follow the Native American Graves Protection and Repatriation Act (NAGPRA) and other appropriate regulations.

The BLM acknowledges that certain effects cannot be fully mitigated to the satisfaction of the tribes. Adverse effects to religious, spiritual, or sacred values cannot be monitored or mitigated. The BLM recognizes that land disturbance from the mining and exploration activities would disrupt “puha” a spiritual power important to the well-being of the Western Shoshone people. Removal of items of importance or significance, although not sacred objects under the definition

in NAGPRA (43 CFR 10.2(b)(5)), could be partially mitigated by having tribal representatives review and possibly curate these items.

The traditional cultural properties (TCPs) were designated by the BLM based on information received from and communications with the Western Shoshone regarding the use of specific locations. The use information is confidential. The Western Shoshone have not provided the BLM with a time of use. Therefore, the BLM is unable to impose timing restrictions for the use of the TCPs. As a result, the assumption is that the use is seasonal and occurs at various times when the Western Shoshone travel through or are in the area. Through discussions between the tribes, BLM and HES a suitable area outside (safe zone) of the restricted area identified or used for mining and exploration activities, yet suitable for the TCP use, may be designated for temporary use by the Western Shoshone until such time as mining, exploration and reclamation actions are complete at the mine and the BLM and NDEP have determine the mine is closed.

Effectiveness: The potential monitoring and mitigation measures stated above would provide for the data recovery of archaeological historic properties that would be adversely affected by the proposed project. Mitigating archaeological sites would recover data that would otherwise be lost. The potential monitoring would also provide a means to evaluate whether or not the other archaeological historic properties that are not adversely affected are being protected or are receiving damage. Avoiding the location of the Monster Grave/Antelope Creek Coming in Prayer Place would protect the area from excavation or ground disturbance. Conducting concurrent reclamation of the WRDFs and other mining and exploration facilities as soon as possible to restore and rehabilitate disturbed ground would lessen the visual effects. If arrangements can be made between HES and the tribes to temporarily use a suitable place outside of the mine operations area so that it is not subject to the Mine Safety and Health Administration (MSHA) regulations and is safe, then this would allow the Western Shoshone the opportunity to continue to use the TCPs while the mining operation is active.

Native American Traditional Values

The BLM acknowledges that certain effects cannot be fully mitigated to the satisfaction of the tribes. Adverse effects to religious, spiritual, or sacred values cannot be monitored or mitigated. When possible, unavoidable adverse effects to known historic properties as well as sites of tribal importance identified within the APE would be mitigated. Since the Western Shoshone have not provided a time for use of the four TCPs, the BLM is unable to consider or impose timing restrictions on mining and exploration activities. Therefore, the BLM is declaring in this document that a significant effect may occur to the TCPs and their use by the Western Shoshone until such time that mining and exploration activities have ceased and reclamation of areas disturbed by mining operations and exploration activities is complete. Western Shoshone representatives may choose to work with the BLM and HES representatives to designate a time for the Western Shoshone to use parts of any particular TCP if it is safe and as appropriate in light of applicable regulations and operations (e.g. MSHA), until such time that reclamation is complete and the BLM and NDEP have determined the mine is closed. The main effect would be the restriction of access for the TCPs that are located within the proposed plan of operations (PoO) boundary and the area immediately adjacent to the proposed PoO boundary due to MSHA regulations that provide for the protection and safety of the employees and the public. Any subsurface archaeological material, including human remains, discovered during construction

activities would be treated in accordance with a HPTP or in accordance with the NAGPRA, as applicable. The BLM would monitor proposed disturbance and any untreated historic properties within or adjacent to the APE. The BLM may invite the interested tribes to attend a field visit to conduct monitoring of historic properties. Monitoring of historic properties, including sites of tribal importance, around areas of exploration and mining would be effective in ensuring inadvertent damage would not occur to these properties. Through discussions between the tribes, BLM and HES a suitable area outside (safe zone) of the restricted area identified or used for mining and exploration activities, yet suitable for the TCP use, may be designated for temporary use by the Western Shoshone until such time as mining, exploration and reclamation actions are complete at the mine and the BLM and NDEP have determine the mine is closed. No additional mitigation or monitoring is recommended.

As expressed to the BLM by the representatives from the Battle Mountain Band, implementation of concurrent reclamation as soon as facilities or parts of facilities are no longer needed in the mining operation and exploration activities would facilitate and minimize effects to the TCPs. The Western Shoshone people would like to see disturbance areas reclaimed as soon as the mine no longer has a need or use for it in the operation.

Paleontological Resources

Issue: Potential impacts to scientifically important invertebrate, vertebrate, or plant fossils, if present, requiring protection under applicable laws and regulations detailed in the BLM Manual H-8270 (BLM 1998c in the DEIS).

Mitigation Measure P-1: HES would coordinate with the BLM and provide funding and other resources, as needed, to ensure implementation of the following procedures designed to protect paleontological resources within the project area, if fossils, are discovered on the ground surface or during ground preparation for the construction of the proposed facilities.

- Field surveys would be conducted by a qualified paleontologist in areas underlain by the Carlin Formation that would be affected by construction, pit expansion, or waste rock storage. The field surveys would identify if there are surface exposures containing visible fossils and if there is a potential for buried fossils within the disturbance footprint. If any important fossils are found during the field survey, a program would be developed and implemented to remove any exposed fossils prior to ground disturbing activities.
- Construction areas identified as having a high potential for buried paleontological resources based upon the field survey, regardless of the mapped geologic unit present, would be monitored by a qualified paleontologist during ground disturbance, including grading, excavation, and trenching.
- Any fossils recovered during the field survey or construction monitoring would be prepared in accordance with standard professional paleontological techniques. A report on the findings of the salvage program, including a list of the recovered fossils, would be prepared following completion of the program. A copy of this report would accompany the fossils to the BLM-approved facility where they would be curated. A copy of the report would also be submitted to the BLM Tuscarora Field Office.

Effectiveness: This measure would allow for the evaluation of any fossils that may be discovered and provide adequate time for their preservation or data recovery.

Soils and Reclamation

No additional mitigation beyond that prescribed in the Reclamation Plan is recommended. The Reclamation Plan specifies monitoring for slope stability, stormwater, groundwater resources, reclamation, and noxious weeds. The Reclamation Plan specifies the following:

- Once disturbance is no longer anticipated in an area, reclamation would occur with subsequent monitoring of revegetation success. Vegetation monitoring would be conducted annually for a minimum of three years in accordance with the Nevada Guidelines for Successful Revegetation. Monitoring would continue until revegetation standards have been met as stipulated in the Reclamation Plan and the BLM and NDEP have released the requirement or need for continued monitoring. Vegetation monitoring reports would be submitted to the BLM and NDEP for review.

Vegetation, including Riparian Zones and Wetland Areas

Issue: Sagebrush is an important habitat in the study area, and the loss of sagebrush communities would have impacts on area wildlife. Sagebrush communities can take several decades to reclaim and this may often be unsuccessful without additional reclamation measures.

Mitigation Measure V-1: Additional reclamation measures would be implemented, when warranted, to assist in the reclamation of sagebrush shrubland communities in the project area. Additional reclamation measures to be implemented could include, but are not limited to:

- Application of mulch;
- Inoculation with arbuscular mycorrhizae;
- Growth media would be direct-placed, when possible;
- The use of imprinters and/or cultipackers; and,
- Planting of sagebrush in small patches.

Reclamation seed mixtures and application rates would be approved by the BLM for public lands.

Effectiveness: The implementation of the additional sagebrush measures would assist in the establishment of successful sagebrush communities by favoring the establishment of big sagebrush in the project area. Big sagebrush would be favored by decreasing competition with noxious weeds through control of non-native invasive plant species, and the amelioration of site conditions through the addition of mulch or inoculation with arbuscular mycorrhizae.

No mitigation or monitoring measures are included for riparian zones and wetland areas.

Noxious Weeds

HES would monitor revegetation success and for the presences of noxious weeds and non-native invasive plant species within the plan of operations boundary. HES would treat noxious weeds

and non-native invasive plant species found within the plan of operations boundary that are associated with the mine and exploration surface disturbance and mineral exploration and mining operations and activities, including road maintenance, as described in their weed management plan.

Grazing Management

Issue: The Project could impede seasonal cattle movements between summer and winter grazing areas and depending on the implementation of the Livestock Fencing Alternative, may prevent livestock from accessing existing water sources within the proposed PoO boundary.

Mitigation Measure GM-1: Coordinate with the Twenty-Five Allotment permittee and the BLM to identify measures to facilitate cattle movement during seasonal cattle drives and evaluate the need to develop additional livestock water sources.

Effectiveness: The success of this measure in reducing potential impacts to livestock grazing operations would depend on the issue(s) and the level of coordination maintained between HES, the permittee, and the BLM.

Wildlife and Aquatic Biological Resources

See HES' letter dated November 2, 2018 (**Appendix B**).

According to Nevada Department of Wildlife (NDOW), HES is also considering whether to voluntarily participate in assisting NDOW to actively monitor mule deer seasonal movements through the Rossi Mine area by providing funding or other assistance to NDOW's mule deer collaring and monitoring program for the Area 6 mule deer population. Under this measure, HES could provide initial funding of \$8,025 to cover the costs of purchasing GPS collars and annual maintenance payments of \$3,400 to cover the costs of data recovery and annual re-collaring efforts for collars that drop off due to mortality or battery issues. The annual maintenance costs could continue through the proposed 8-year life of mine extension. These costs represent approximately 25 percent of the total collaring estimated study costs. The remaining 75 percent of collaring study costs would be covered by a 3 to 1 matching federal Pittman-Robertson grant received through the NDOW. NDOW would apply for matching grant funding from federal Pittman-Robertson upon the approval of the Rossi Mine Record of Decision (ROD). A copy of the data would be provided to the BLM either in a report or an acceptable format determined by the BLM and NDOW.

Effectiveness: If HES decides to voluntarily participate in assisting NDOW, implementation of the mule deer collaring mitigation measure would help to determine and document where mule deer travel or migrate in the vicinity of the Rossi Mine. This action would provide information to the NDOW and BLM regarding how mule deer are traversing through and around the Rossi Mine in order for the agencies to determine to what extent the mule deer migration routes are actually impacted.

Issue: Impediments to mule deer migration within the migration corridor at the Rossi Mine site.

Mitigation Measure WL-2: HES, in coordination with the BLM and NDOW, would conduct an annual field review of the mule deer migration corridor in the vicinity of the Dawn Pit and Dawn WRDF prior to September 30 to determine if any impediments to migration exist as a result of the mining operation and exploration activities. In the event that unnecessary impediments do exist within the migration corridor, HES would take corrective action to reduce or eliminate the impediments prior to October 30 of that year. This measure would occur until the earthwork portion of reclamation is complete at the Dawn Pit and southern end of the Dawn WRDF. The BLM would encourage HES to plan their exploration activities to refrain from or avoid drilling in the migration corridor in the vicinity of the Dawn Pit and Dawn WRDF during the mule deer migration. During the field visit both mine operations and exploration activities would be evaluated for impediments during the fall migration.

Effectiveness: Implementation of this mitigation measure would avoid and reduce project-related impacts to mule deer by ensuring that unnecessary impediments to migration within the corridor are removed prior to seasonal migration periods.

Special Status Species

See HES' letter dated November 2, 2018 (**Appendix B**).

Issue: Potential direct impacts to pygmy rabbits from mine construction.

Mitigation Measure SSS-1: Pre-construction clearance surveys for pygmy rabbits would occur prior to any surface disturbance. Pygmy rabbits are known to be active above ground throughout the year; therefore, clearance surveys would be required to be conducted regardless of the season. If occupied pygmy rabbit habitat is identified during pre-construction clearance surveys and occupied (especially natal) burrows are found, then new disturbance would not occur within 200 feet of those areas. If disturbance of these areas is determined to be unavoidable, consultation with the appropriate BLM and NDOW wildlife biologists would occur to develop avoidance strategies and mitigation techniques.

Effectiveness: By implementing mitigation measure SSS-1, potential direct impacts to pygmy rabbits and their habitat would be reduced.

Issue: Mortality resulting from Greater Sage-Grouse (GRSG) striking fencing could impact GRSG populations within the Project area.

Mitigation Measure SSS-2: For the proposed project alternatives, the installation of fencing located within GRSG priority habitat management areas (PHMA), general habitat management areas (GHMA) and other habitat management areas (OHMA) (based upon lek proximity and topography) should be minimized to the extent possible. In areas where the installation of fencing is unavoidable, in coordination with the BLM and NDOW, fencing would be modified or marked in a manner that results in increased visibility to GRSG. The NDOW currently recommends using the Natural Resources Conservation Service (NRCS) Fence Collision Risk Tool to determine the need for fence marker placement.

Effectiveness: By implementing mitigation measure SSS-2, HES would be able to minimize mortalities of GRSG resulting from collisions with mine operation fencing or the Livestock Fencing Alternative, if it is implemented.

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ROSSI MINE EXPANSION PROJECT

FINAL ENVIRONMENTAL IMPACT STATEMENT (EIS)

APPENDIX B

APPLICANT CORRESPONDENCE

B.1 Introduction

The BLM received the following letter from the Project Applicant on November 5, 2018.

HALLIBURTON

Baroid HIPS/Manufacturing - Health, Safety and Environment
3000 N Sam Houston Pkwy E, Bldg. SR, Office 2162 • Houston, TX 77032

November 2, 2018

United States Department of the Interior
Bureau of Land Management
Elko District Office
3900 Idaho Street
Elko, NV 89801
Attn: Melanie Peterson, Tuscarora Field Office Manager

REC'D BLM ELKO DISTRICT
5 NOV '18 PM2:28

**Re: Voluntary Off-Site Compensatory Mitigation for Rossi Mine Expansion Project
Draft EIS**

Dear Ms. Peterson:

Halliburton Energy Services, Inc. (HES) respectfully submits this official notification to the United States Department of the Interior, Bureau of Land Management, Elko District Office (BLM) of its decision regarding participation in voluntary off-site compensatory mitigation for wildlife and special-status species as described in the Rossi Mine Expansion Project (DOI-BLM-NV-E020-2015-0041-EIS) Draft Environmental Impact Statement (DEIS). As set forth under BLM Instructional Memorandum 2018-093, such off-site compensatory mitigation is a voluntary action under the Federal Land Policy and Management Act of 1976, 43 U.S.C. §§ 1701-1789, as amended.

HES has determined that it will not participate in voluntary off-site compensatory mitigation for Greater Sage-Grouse or Mule Deer as described in the DEIS, whether through voluntary off-site habitat enhancement efforts or voluntary participation in the State of Nevada's Conservation Credit System (CCS).

However, HES hereby notifies BLM that it will participate in voluntary Area 6 Mule Deer monitoring as described in Section 3.17.4.2 of the DEIS.

If you have any questions regarding this letter, please do not hesitate to contact me. Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to read 'W D Scott', with a large circular flourish at the end.

Warren Scott, Global Mine Manager
Halliburton Energy Services, Inc.

Cc: Klete Fallowfield, Halliburton HSE Manager
John D. Fognani, Esq., Haynes and Boone, LLP
Michael T. Hegarty, Esq., Haynes and Boone, LLP
Ed Groff, Halliburton Vice President & Chief Commercial Counsel